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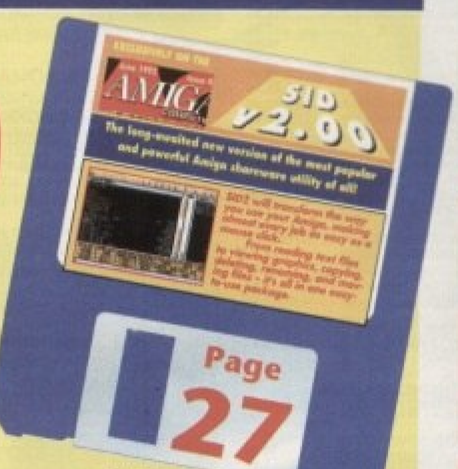
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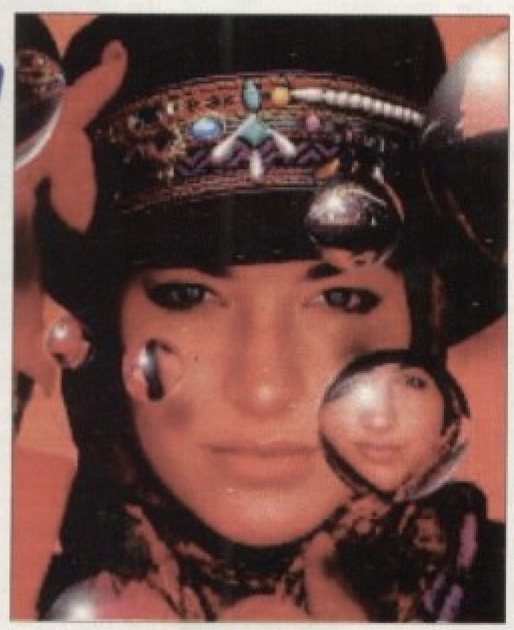


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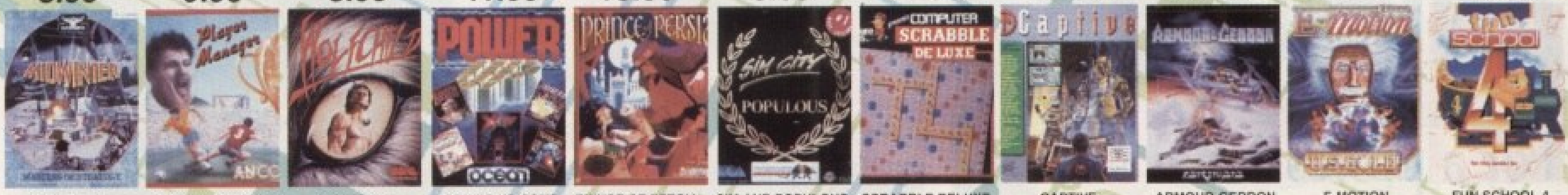
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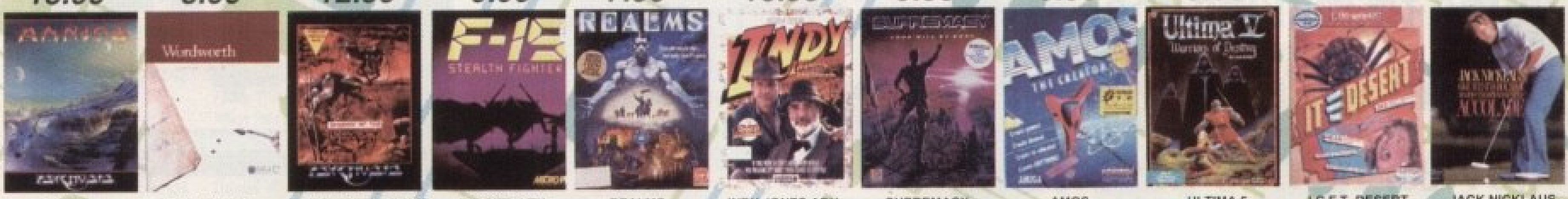
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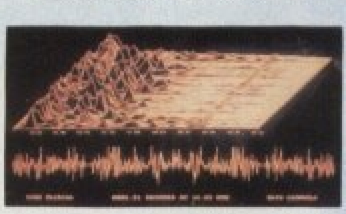
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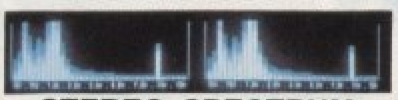
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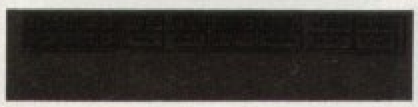
3D DISPLAY OF SAMPLE FREQUENCIES (FFT)

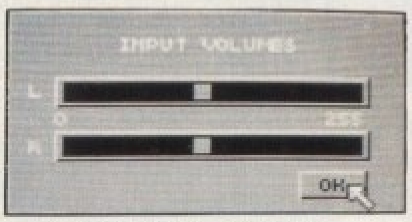


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microdeal

AMAS 2

ADVANCED MIDI AMIGA SAMPLER TWO

AMAS 2 for the AMIGA

Following in the footsteps of one of the best sound samplers ever produced comes the innovative AMAS 2. With even more features than the original Amas which was featured in the Paula Abdul music video "Cold Hearted" this package is high in professionalism but low in price. Amas 2's new digital input controls allow you to adjust the input level of your sounds from the software suite by precise adjustment rather than by messy analogue controls as you would find on other samplers. By purchasing this state of the art product which combines a quality sampler with the expertise of over 10 years of software programming, you are purchasing a top quality product in the knowledge that it is not only compatible with existing Microdeal products but will also be with future ones.

What is AMAS 2

Amas 2 is a high quality sound sampler and midi interface for the Amiga range of computers. The sampler cartridge in its stylish wedge shaped box enclosed in this package plugs into the printer and serial ports at the rear of the computer and allows you to analyze the sounds coming in, change the way they sound by using the real time special effects or record sounds all using devices such as Personal Cassette players, Compact Disc Players etc. Once in the computer AMAS 2's unique editor will enable you to edit the sound in practically any way you can imagine and even add some special effects to the sounds. Once you have the sound sample how you want it, you may incorporate it into your own programs or use Amas 2's unique MIDI playback controls for replaying the sample from a MIDI keyboard or similar.

The Sampling Software

Every feature you would expect to find in a professional editing suite including;

* Real time record/play ghost markers
* Cut or Delete selected sample area
* Mix sample with full or half volume
* Shrink in by 25%/50%/75% by drag or wipe
* Fade in/out with selectable degree of fade
* Filter sample with soft/medium/hard filter
* Selectable trigger volumes
* Record frequency from 3.0 to 55.9 Khz
* Full editing and control facility for left/right channels
* Software selectable left and right digital input volume controls (255 levels)
* Playback volumes
* Decrease volume
* Increase volume
* Bounce sample
* Paste sample
* Trigger recording
* Clear left/right samples
* Loop sample

The Special Effects Software

For the first time ever you can emulate special sound effects in real time just like the sound labs can for film studios, normally the hardware to produce these effects would cost many times more than this package. Features on the FX menu include;

* Built in real time special effects
- including Echo, Reverb, Ramp, Pitch up/down, Stereo bounce, Multi echo Chorus, Phaser, Reverse and Pitch bend.
* Fully programmable special effects so that customised effects can be recalled
* Samples can be re-played back through the special effects menu

The Analytical Software

A whole host of pro-type analytical functions include;

* 3D display of sample frequencies (Fast fourier transform)
* 3D display also includes 2D envelope display plus sample information
* Built in Stereo spectrum analyzer
* Stereo Oscilloscopes with trigger markers

The MIDI software

Easily accessable from pull down menus the new MIDI software suite allows you to trigger samples using either and external MIDI keyboard or the Amigas keyboard. Just look at these features;

* Selectable MIDI channels
* 2 voice polyphonic (Stereo)
* Up to 18 Stereo or Mono samples can be mapped onto the keyboard
* Multiple MIDI keyboard splits
* Load/Save sample set (with settings/splits).

Other innovative features

We know this product is years ahead of its time and these additional features justify our boast;

* New style stereo cartridge
* Produces stand alone executable sample files
* Fully multi tasking
* Saves in IFF/Raw/Instrument1/3/5 Octave
* Microphone included in package
* PAL/NTSC full screen display
* Can create workbench icons
* Save customised settings

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AMIGA COMPUTING NEWSLINE

By John Butters

A600 heads for Britain

THE smallest and newest computer in the Amiga family – the A600 – will hit Britain during May at a £399 price point, Commodore have just confirmed.

The A600-HD fitted with an internal 20Mb hard disk drive will sell for £499 and the company have no imminent plans for models with higher capacities.


Commodore carry A600 during May

Shown for the first time in the UK at the recent European Computer Trade Show in London, the A600 will be bundled with art package Deluxe Paint III and an as yet unnamed game.

It will have a 12-month on-site warranty, which is an unusual benefit for leisure home computer owners, and is believed to have been made possible because of the move to more reliable surface mount technology.

Commodore boss Steve Franklin: "Ever since its launch in 1985, the Amiga has been subject to a program of constant improvement and evolution, designed to keep it safely in its position as market leader."

He added: "This latest range is a giant leap forward, giving the user state-of-the-art computing power at an affordable price."

Advertising campaigns have already be drawn up for the computer press and television. Insiders say they centre on the fact that the baby machine can be carried easily.

There is, meanwhile, mounting industry speculation that the A500 will be dropped within the year and that an Amiga running from a 68020 processor will enter above the A600. The firm neither deny nor confirm the rumour.

Commodore in crisps link

THE A600 is to feature in a new nationwide promotion being run between Commodore, Ocean Software and Smiths Crisps.

Special Quavers packs will feature a decoder giving people the chance to win the new computer or copies of Pushover, Ocean's game starring Quavers' character Colin Curly.

"Smiths' agency, BDP, came to Commodore after their research revealed that the Amiga is the most desirable product of its type," said Commodore's Dawn Levack.

"This is the first time home computers have featured in this type of promotion and we're sure it will get the new Amiga off to a flying start."

Quavers' Sally Hollowell offered: "This is the first ever promotion of this type in the snacks sector and we are delighted to be involved with Commodore and Ocean.

"The promotion is directly targeted at kids' number one leisure activity and we're convinced that this will secure a significant demand for Quavers during the summer."

Price plunge for A500P

PRICES for the A500P Cartoon Classics pack have plunged further in the last few weeks, despite Commodore claims that chains would return the bundle to £399 after Christmas.

At least one High Street giant is now selling the pack for less than £350. With the current price war among electrical retailers, others are likely to follow.

And one insider has told *Amiga Computing* to expect more cuts as shops attempt to clear stock as the arrival date of the A600 nears.

Meanwhile, a rival manufacturer claimed retailers have been forced to drop prices because they are holding surplus Amigas after a slack winter.

A570 shown and gains support

THE A570 CD-ROM drive for the A500 and A500P was shown for the first time in the UK recently, as three software giants pledged their support for the system.

Acclaim, Domark and Gremlin are the latest firms to say they will be releasing Amiga titles on both floppy disk and CD by the end of the year.

"Christmas 1992 will see the first true market for CD-ROM-based games develop," said Acclaim's European vice president Rod Cousens.

"Acclaim will be perfectly placed to make full use of the many advantages offered by the new format."

Gremlin are looking at using the increased storage capacity that CD offers to improve their Amiga games.

Said boss Ian Stewart: "As Amiga games become more and more complex, conventional floppy disks are becoming a less suitable storage medium."

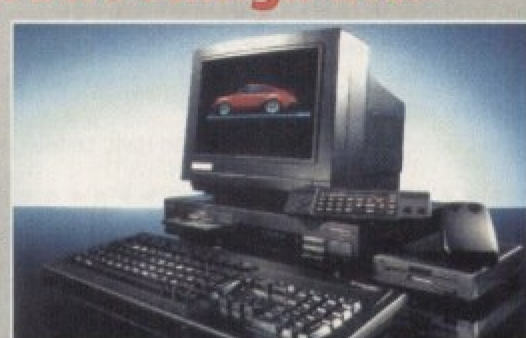
He continued: "The compact disc is the format of the future and Gremlin intend to be a leading player in this market from the very start."

As we went to press, Commodore were still unable to confirm an on-sale date or price for the drive, although industry sources have speculated it will cost £269.

CDTV grows Amiga bits

THREE new CDTV peripherals to enable the player to operate like any other Amiga were launched in London recently.

They included a 96-key Qwerty keyboard, a mouse and a 3.5in floppy disk drive. Each is housed in a black case, enabling them to blend in with the player.


CDTV turns into computer

They were released in Germany earlier this year in a bundle called Amiga CDTV, but in Britain, where the standalone player is now sold as Amiga CDTV, Commodore will not be finding a new marketing name.

"Thousands of homes are already enjoying the benefits offered by the standalone Amiga CDTV," claimed Commodore boss Steve Franklin. "These add-ons can only serve to make the system even more interactive and productive.

"With the launch of other CD-ROM-based systems, including [Philips] CD-I, creating an even greater public awareness for this new form of home entertainment, Amiga CDTV can only continue to grow in stature."

Prices were unavailable.

Upgradable laser released

DESKTOP publishers are being targeted for an upgradable HP Laserjet III-compatible laser printer, just released by Silica Systems (081-309 1111).

Selling for £699, the Ricoh LP1200 has a resolution of up to 400 dots per inch, 2Mb of memory and a print speed of six pages per minute.

A unique Flash ROM upgrade feature allows owners to keep up to date with laser developments such as printer command languages.

Silica spokesman Andy Leaning said: "The Ricoh LP1200 is the ideal printer for Amiga users. With 2Mb of RAM as standard and up to 400 dots per inch, it is perfect for DTP work.

He continued: "Other laser printers with less memory cannot handle such work without expensive extra memory. Silica recommend the LP1200 for any Atari ST user."

Frontier products saved

MARPET Developments have grabbed all rights to Frontier Software's Amiga products including the Xtra-RAM A500+ memory expansion board.

The move follows the recent collapse of Arben Electronics, who traded as Frontier Software. Based in North Yorkshire, Marpet can be telephoned on 0423 567140.



Xtra-RAM A500+ goes to Marpet Developments

Europress sponsor show

EUROPRESS Publications, publishers of *Amiga Computing*, have joined forces with show organiser Westminster Exhibitions to sponsor the next International Computer Show.

Incorporating the popular 16 Bit Computer Show, the event is to be focused entirely around the home computer market. More than 180 exhibitors are due and many intend to show latest Amiga products.

Said Europress's Jane Conway: "The show is respected for giving enthusiasts the opportunity to see new Amiga software and hardware and buy it at discounted prices.

"Readers will be able to meet our editorial staff and we will be extending discounts for many products on sale throughout the show," she added.

"We are delighted to be working alongside Europress," said Westminster boss Tim Collins. "We like the editorial style of its magazines and feel they give total coverage of, and totally reflect, our target market."

It will be held at Wembley Exhibition Halls, London on July 10 to 12.



Commodore power up

OWNERS of A1500s and A2000s will soon be able to upgrade to the powerful A3000 at special exchange prices.

Prices and confirmed details of the Power Up scheme remain to be announced by Commodore.

Mid-range Amiga owners will be offered upgrades to the A3000

G-Force powers up

AMERICAN peripheral giant Great Valley Products' have redesigned their Combo range of A2000 accelerators to give improved performance.

The old 22MHz board has been replaced with the G-Force 030 running at 25MHz and featuring a built-in SCSI controller and maths co-processor.

One megabyte of memory is supplied – expandable to 13Mb – and it costs £599.

Taking the place of Combo 33 is a 40MHz version. Also fitted with a maths co-processor, it has 4Mb of memory which can be increased to 16Mb. Price: £999.

And at the top of the range is a 50MHz board, running from a standard 68030 processor. Sold with 4Mb of RAM and accepting a maximum of 16Mb, it costs £1,399.

The 25MHz and 40MHz versions use economical 680EC30 processors and the 50MHz board runs from a standard 68030 chip. All three can be bought with an optional hard drive mounting kit.

GVP president Gerard Bucas commented: "There is no reason to look beyond G-Force 030 for performance or price, no matter what your accelerator needs."

The UK distributor is Silica Systems on 081-309 1111.

Music tools cleared

TOOLS Without a Home is a scheme just started by Amiga music specialist The Blue Ribbon SoundWorks for users of the company's Bars & Pipes range of software.

Run as a "clearing house" for tools and accessories developed by and for users of the program, these collections are then sold directly from the firm for a small charge.

"Over the past few months we've been amazed at just how many users are creating their own enhancements to Bars & Pipes and Bars & Pipes Professional," said Blue Ribbon's Allison Plant.

"We hope that the Tools Without a Home program will inspire even more. Those users who don't create their own tools and accessories will surely benefit from those who do."

For more information call UK distributor Zone Distribution on 071-738 5444.

ADI teaches on Amiga



Children soon to meet ADI, the latest education package

CHILDREN between 11 and 14 years old are to be targeted for a new range of Amiga home study programs due soon from the company behind the best selling Fun School software.

Maths, English and French are taught in 12 separate packages, where a "loveable" extra-terrestrial called ADI guides, helps and tutors the student through each subject.

ADI uses facial expressions to interact with children, checking their performance at regular intervals, whistling at their progress and going to sleep when bored.

To help keep the pupil's attention he tells jokes and helps them play games for recreation and reward.

"ADI has so much personality that, during testing, young students happily spent long sessions working on the exercises," claimed Europress Software boss Chris Payne.

Each disk costs £25.99. Europress can be telephoned on 0625 859333.

Mindscape move

ALL departments at Mindscape International are now operating from Priority House, Charles Avenue, Burgess Hill, West Sussex RH15 9PQ. The telephone number is 0444 246333.

Extras for SuperJAM

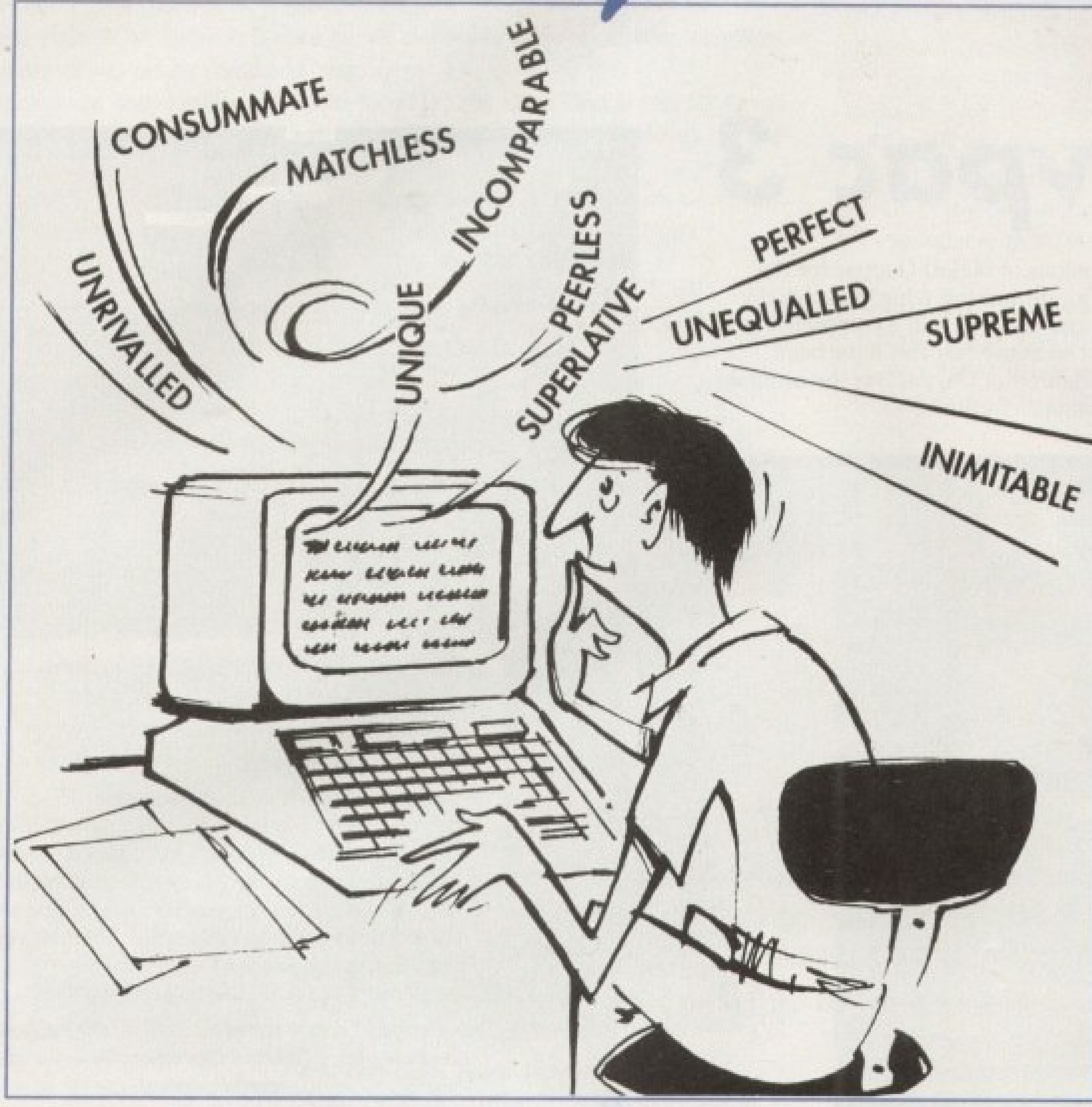
THREE extra disks are to be released for The Blue Ribbon SoundWorks' SuperJAM interactive composition program.

They are the Pop/Rock, Classical and Cutting Edge disks and each contains a collection of new musical styles, demos and sample chord progressions.

The UK supplier, Zone Distribution (071-738 5444), were unable to supply prices as we went to press.

PROTEXT 5.5

"You won't be lost for words" . . .



. . . with Protext 5.5 because the pop-up thesaurus will provide you with inspiration whenever you need it. With words provided by Collins the thesaurus has 43,000 main entries and 827,000 responses!

Protext 5.5 introduces enhanced text formatting options. Automatic hyphenation lets you produce a well-spaced page layout without the bother of manually putting in soft hyphens. Protext determines the correct hyphenation points by algorithms and look-up tables. Elimination of widows and orphans is also provided. You will no longer need to worry about those infuriating single lines at the top or bottom of pages. Protext formats the text to avoid these as you edit the text. Extra blank lines at the top of a page can be suppressed.

New document analysis features provide a wealth of information about your text. You can examine a list of all the words used - alphabetically or by the number of occurrences. Other statistics shown include average word length, average sentence length and a table of the number of lines on each page.

Plus many more improvements . . .

- ☆ Enhanced file selector with different sorting methods, bulk copy and erase.
- ☆ Prodata users - mail merge directly from Prodata files, no need to export.
- ☆ Mail merge: nested repeat loops.
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Choice of pull-down menu or keyboard operation, extensive printer font support and proportional formatting while editing, up to 36 files open, split screen editing, characters for 30 languages, index and contents, footnotes, newspaper column printing, file sorting, macros, indent tabs, mail merge programming language, exec files and the fastest search and replace around. Altogether the most comprehensive word processing software for your Amiga or ST.

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"one hell of a performer" — COMPUTER SHOPPER

"if you need a professional word processor Protext is perfect" — AMIGA COMPUTING

"nothing else available comes close" — ST APPLICATIONS

PRODATA 1.2

New version of Prodata now with pull-down menus, mouse or keyboard operation, automatic record numbering, merge database, instantaneous filtering, prologue form, edit fields in any order, 2-across label printing. Full details available from Arnor.

Price: £85+VAT, upgrade from v1.1 £30+VAT.

PRICES (including VAT and delivery)

For Commodore Amiga, Atari ST or TT.

Protext 5.5	**£152.75**
Upgrade from 5.0 to 5.5	**£30**
Upgrade from 4.2/4.3 to 5.5	**£60**

Please return your original disks when upgrading

French or German spelling dictionary	**£35.25**

When upgrading please return any extra spell checking dictionaries for a free update to the revised version.

☆ Both Protext 5.5 and Prodata require 1Mb of memory

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Games day helps NSPCC

THE National Society for the Prevention of Cruelty to Children (NSPCC) are to benefit from National Play a Game Day, held recently to raise awareness of the advantages of computer games.

Created and organised jointly by the European Leisure Software Publishers Association (ELSPA) and show organiser Blenheim OnLine, it will become a yearly fund-raising event.

Money will be raised for the charity through retail and sales promotions and many major companies including Commodore have thrown their support behind the event.

Blenheim's John Murrey commented: "This is a marvellous opportunity to not only help spread the understanding and enjoyment of video and computer game products, but also benefit an excellent charity.

Stunning sound from SunRize

SUNRIZE Industries are now selling their AD1012 digital audio card with Studio 16 editing software, enabling several hours of sound to be recorded directly to hard disk.

The AD1012 has a built-in SMPTE time code reader to allow synchronisation of digital sound to videotape and it can record, edit and play back four tracks direct to a hard disk.

It plays sound with 12 bits of resolution at sampling rates of up to 100,000 samples every second.

Two eighth order linear phase anti-aliasing filters are provided – one for input and output.

A sound accelerator chip allows the card to perform digital effects – such as flanging, chorusing and echoes – in real time.

Studio 16's features include cut, copy and paste and mix, as well as more advanced functions such as an SMPTE cue list.

For use with the A1500, A2000 or A3000, it costs US$595. California-based SunRize can be telephoned on 010 1 408 374 4962.

Oxxi on the move

OXXI UK, formerly Precision Software, have moved offices. The new address is 171 Bath Road, Slough, Berkshire SL1 4AA.

Transport on disk

SIX Amiga clip art disks featuring transport are to be released in June by Diskotech (05912 242).

Titles in the Movieclip range include Road Traffic 1, Air Traffic, Rail Riders, Horse Traffic and Water Traffic. Each costs £10 and a demo can be bought for £1.

DO YOU KNOW SOMETHING WE DON'T?

Although *Amiga Computing* has scores of contacts in the Amiga world, we need you. If you have some hot news, ring John Butters on the news desk now on 0625 878888 or fax to 0625 879966. All information supplied will be treated in the strictest of confidence.

Better beats

BEAT Studio is the latest stereo sound sampler, just released by City Beat (0234 857777).

Sampling and editing software with more than 100 functions is packaged with a stereo sampling cartridge which connects to the computer's parallel port.

The cartridge accepts sound from sources including CD players, personal stereos, radios and cassette recorders.

Among Beat Studio's features are real time sampling in mono, stereo and simulated stereo modes and sampling at over 36kHz in stereo and more than 57kHz in mono. It has a variety of editing and real-time options, loop play, a song sequencer linking up to nine samples to create songs and a Midi sequencer enabling a Midi keyboard to be programmed. Price: £39.95.

More go to CeBit

ATTENDANCE at this year's CeBit show grew to 640,000 – an increase of more than 10 per cent over last year – and the organisers have announced that next year's Hanover event will run from March 24 to 30.

Megadrive comes to Amiga

AMIGA joystick wagglers will soon be able to play Sega Megadrive games on their computer using Amiga Drive, a new emulator from Advanced Emulation.

But price rules the move out as a reasonable option. The proposed cost of the software and cartridge-to-disk adaptor at £119 takes Amiga Drive just £10 short of the recommended price for the actual Sega machine supplied with a top game.

Though details of the product arrived on April 1, it is not believed to be an April Fools joke. The press was not given a telephone number for the manufacturer.

Music program fixed

MINOR improvements and bug fixes have been made to The Blue Ribbon Soundwork's Bars and Pipes Professional Midi program.

Version 1.0e also lets Pro Studio Kit and Creativity Kit to be used to their full potential.

Users can upgrade by sending details of their serial number and US$9.50 to the firm at 1293 Briardale NE, Atlanta, Georgia 30306, USA or by telephoning 010 1 404 377 1514.

Improved animation for CDTV

A HIGH performance animation and video format used in CDTV players is now available for developers using ASDG's Art Department Professional.

ADPro's new CDXL input and output modules allow high speed access to any frame in an animation or video sequence and enable information to be associated with each frame.

CDXL allows playback of quarter to third screen video sequences at 12 to 15 frames per second, with 4,096 colours on-screen and sound.

Wisconsin-based ASDG can be telephoned on 010 1 608 273 6585.

Keeping it clean

IT is the policy of *Amiga Computing* not to accept advertisements offering software containing pornography or scenes of excessive violence.

DIARY DATES

28 to 31 May 1992
Spring Computer Shopper Show
Organiser: Blenheim PEL
(081-742 2828)
Venue: Olympia, London
An area called Amiga Shopping Centre will be devoted to the machine.

10 to 12 July 1992
6th International Computer Show
Organiser: Westminster Exhibitions
(081-549 3444)
Venue: Wembley Exhibition Halls, London
The second show of the year, for an event that's getting more and more support from the industry and sponsorship from *Amiga Computing*.

6 to 8 September 1992
European Computer Trade Show Autumn
Organiser: Blenheim PEL
(081-742 2828)
Venue: Business Design Centre
A new trade-only event for the computer leisure industry.

5 to 8 November 1992
World of Commodore '92
(0225 442244)
Venue: Earls Court 2, London
A Commodore-specific exhibition, with plenty for Amiga users.

OVERSEAS

28 to 31 May 1992
Consumer Electronics Show
Organiser: EIG/CEG
Venue: Chicago
The show opens for the first time for the public on May 30, 1992.

8 to 11 October 1992
Computer Shopper Show
Organiser: AMI Shows Europe
(010 49 2234 22021)
Venue: Koln Messe
A chance to catch up on the year's developments in the active Amiga world.
Used to be known as Amiga Koln.

26 to 29 November 1992
World of Commodore '92
Organiser: Fairs & Fun
(010 49 8106 34094)
Venue: Frankfurt Exhibition Halls
The main Commodore show in Germany. 100,000 visitors expected.

• If your company is organising a show relevant to the Amiga and it's not listed, let us know so we can include the information in the diary.

Whats New USA

I t's a big month for Amigans who use their machines for more than shoot-'em-ups. Soft-Logik have released the Hotlinks Edition add-on for PageStream, Gold Disk have finally shipped Professional Page v3.0, and New Horizons have yet another ProWrite update.

Gamers shouldn't despair, either. Although it seems that more and more entertainment software is coming from the UK nowadays, a few superb entertainment packages of US origin have been released as well.

Most notable is the long-awaited Black Crypt, Electronic Arts' labyrinthian game that includes 20 interconnected dungeons and hundreds of horrid, cunning beasts, all rendered in beautiful 64-colour halfbrite graphics.

While Black Crypt is technically impressive, some hard-core gamers have reported finishing it in as little as a few days. If this happens to you, check out New World Computing's Might and Magic III: Isles of Terra for the Amiga.

Over 4Mb of compressed graphics and sounds, a great 3D perspective, and both dungeon and outside locales will make the 100+ hours of challenging play contained in this game exciting and fun.

A third dungeon game of American origin, MindCraft's The Keys to Maramon, is worth skipping, unless you really want to relive the experience of playing dungeon games on a circa-1983 Apple II.

From Denny Atkin

Tanks for the upgrade

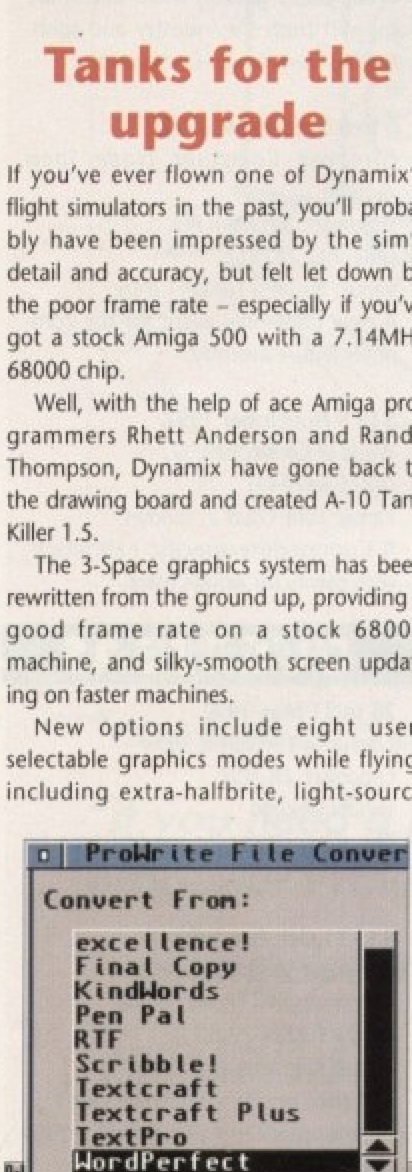
If you've ever flown one of Dynamix's flight simulators in the past, you'll probably have been impressed by the sim's detail and accuracy, but felt let down by the poor frame rate – especially if you've got a stock Amiga 500 with a 7.14MHz 68000 chip.

Well, with the help of ace Amiga programmers Rhett Anderson and Randy Thompson, Dynamix have gone back to the drawing board and created A-10 Tank Killer 1.5.

The 3-Space graphics system has been rewritten from the ground up, providing a good frame rate on a stock 68000 machine, and silky-smooth screen updating on faster machines.

New options include eight user-selectable graphics modes while flying, including extra-halfbrite, light-source shaded polygons, HAM screens between missions and over 20 missions, including a number of actual Operation Desert Storm flights.

Upgrades are available for owners of the original A-10 – contact Sierra for details. If you've been wanting a sim with Dynamix accuracy and MicroProse screen-update speed, look no further.



ProWrite gets even better

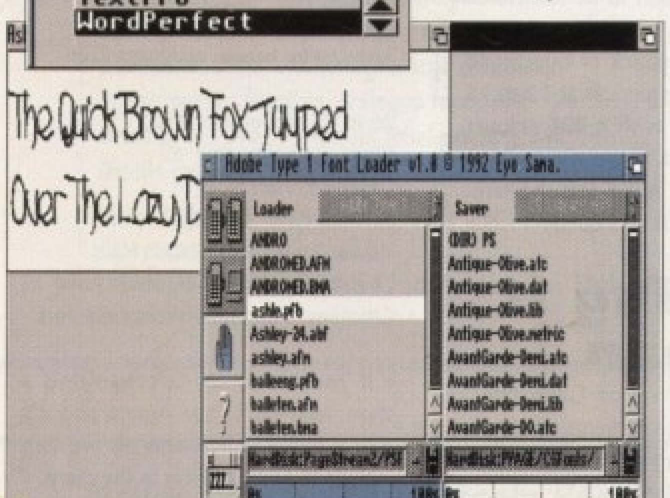
New Horizons have announced yet another update of ProWrite, v3.2.3. The actual program has changed little – mainly bug fixes and faster printing speed (up to four times quicker on high resolution printers).

The bonus comes on an extra disk which includes a number of new fonts in a variety of sizes to support ProWrite v3.2.3's PostScript and High Quality print options, as well as an improved utility program that will be very useful to those upgrading from other wordprocessors.

ProWrite v3.2.3's Convert utility will convert document files from BeckerText, excellence!, Final Copy, KindWords, Pen Pal, Scribble!, TextCraft and TextCraft Plus, TextPro, and WordPerfect to ProWrite format.

Only those features supported by ProWrite are converted, so if your files utilise footnotes, indices, or other advanced features, those sections will be lost. The program does handle font conversion from excellence! and Pen Pal, but it won't bring in IFF graphics.

If you use a PC at work and want to output your document on your Amiga, Convert will translate RTF (Rich Text Format, supported by most MS-DOS and Macintosh wordprocessors) files.



Convert Adobe fonts to Compugraphic with ProPage 3

A matter of Sim Antics

The latest in Maxis' SimSeries, SimAnt puts you in charge of a black ant colony in an all-out war against a rival red ant colony for food and territory.

Besides enemy ants, other dangers include vicious spiders, voracious ant lions, torrential rain, crushing human feet, and a giant lawn mower. Based on real ant behaviour, this game is actually educational as well as fun.

Like any good war game, SimAnt includes both individual battles and full-scale campaign. In the Quick Game, you must out-breed and outgather the red ants, kill their queen, and eat their young. Just the thing for an hour's diversion.

In the Full Game, you've got an entire yard to conquer patch-by-patch, and then it's into the house to take it over as well (this is one game that actually includes the kitchen sink!). An experimental mode turns the computer that cost you hundreds of pounds into a giant ant farm.

Cute yet disgusting digitised sounds abound, and the graphics are superb. SimAnt is notable for including two versions – a lo-res, 320 x 200 mode game for owners of 1Mb Amigas, and a hi-res, 640 x 400 version for Amigans with at least 1Mb of Chip memory and 2Mb total (all Chip or mixed Fast and Chip).

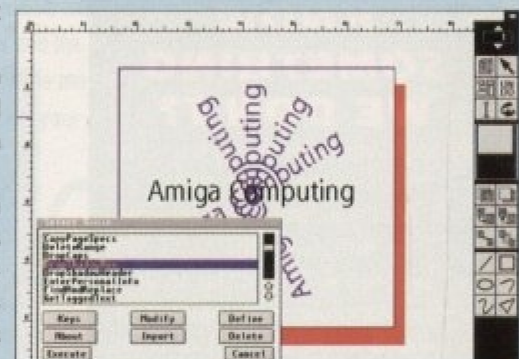
With a flicker fixer, the hi-res version looks like a game taken from a £5,000 Macintosh.

Professional Page v3.0 is fontastic!

Professional Page v3.0 is now shipping, and it's chock full of new features. Its new ARexx support and Page Genie ARexx macros add awesome flexibility to this desktop publishing mainstay. Creating complicated page formats and adding special effects to your documents is now a snap.

Links to Art Department Professional, Professional Calc, and Professional Draw v3.0 make data exchange much easier, and a new tiling feature lets you output larger pages by printing multiple sheets and taping them together.

But the neatest feature is the new FontManager program. This utility converts Adobe Type 1 PostScript fonts in Compugraphic Intellifont format for use Professional Page. While this is handy in itself, it's a great bonus for users of AmigaDOS 2.04.



These Intellifonts can be run through the Fountain utility and used as scalable outline fonts with the operating system.

With hundreds of public domain and shareware PostScript fonts available, new Compugraphic-format scalable fonts should be flooding bulletin boards and PD libraries soon.



NEW AMIGA ACTION REPLAY MK III

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- **VIRUS DETECTION**
Comprehensive virus detection and removal features to protect your software investment. Works with all presently known viruses.

NEW **BURST NIBBLER.**
Now this super disk copier program is built into Action Replay Mk III. Just imagine a superfast, efficient disk copier program at the press of a key - no more waiting.

- **SAVE PICTURES AND MUSIC TO DISK**
Pictures and sound samples can be saved to disk. Files are saved directly in IFF format suitable for use with all the major graphic and music packages. Samples are displayed as screen waveform.

NEW **PAL or NTSC MODES SELECTABLE -**
Useful for removing ugly borders when using NTSC software. (Works only with newer Agnus chips).

- **SLOW MOTION MODE**
Now you can slow down the action to your own pace. Easily adjustable from full speed to 20% speed. Ideal to help you through the tricky parts!

NEW **MANY MORE INSTANT CLI COMMANDS -**
like Rename, Relabel, Copy, etc.

- **RESTART THE PROGRAM**
Simply press a key and the program will continue where you left off.

- **FULL STATUS REPORTING**
At the press of a key now you can view the Machine Status, including Fast Ram, Chip Ram, RamDisk, Drive Status, etc.

- **POWERFUL PICTURE EDITOR**
Now you can manipulate and search for screens throughout memory. Over 50 commands to edit the picture plus unique on screen status "overlay" shows all the information you could ever need to work on screens. No other product comes close to offering such dynamic screen handling of frozen programs!!

NEW **JOYSTICK HANDLER -**
allows the user to select Joystick instead of Keypresses - very useful for many keyboard programs.

- **MUSIC SOUND TRACKER**
With Sound Tracker you can find the complete music in programs , demos,etc. and save them to disk. Saves in format suitable for most track player programs. Works with loads of programs!!

- **AUTOFIRE MANAGER**
From the Action Replay III preference screen you can now set up autofire from 0 to 100%. Just imagine continuous fire power? Joystick 1 and 2 are set separately for that extra advantage!

NEW **IMPROVED RAM EXPANSION SUPPORT.**
Now many more external Ram Expansions will work with all Action Replay III commands.

- **DISKCODER**
With the new "Diskcoder" option you can now 'tag' your disks with a unique code that will prevent the disk from being loaded by anyone else. 'Tagged" disks will only reload when you enter the code. Very useful for security.

NEW **SET MAP -**
allows you to Load/Save/Edit a Keymap.

- **PREFERENCES**
Action Replay III now has screen colour preferences with menu setup. Customise your screens to suit your taste. Very simple to use.

- **DISK MONITOR**
Invaluable disk monitor - displays disk information in easy to understand format. Full modify/save options.

NEW **IMPROVED PRINTER SUPPORT -**
including compressed/small character command.

- **DOS COMMANDS**
Now you have a selection of DOS commands available at all times - DIR, FORMAT, COPY, DEVICE, etc.

NEW **FILE REQUESTOR -**
if you enter a command without a filename, then a file requestor is displayed.

- **DISK COPY**
Disk Copy at the press of a button - faster than Dos Copy. No need to load Workbench - available at all times.

NEW **PLUS IMPROVED DEBUGGER COMMANDS -**
including Mem Watch Points and Trace.

- **BOOT SELECTOR**
Either DF0 or DF1 can be selected as the boot drive when working with Amiga Dos disks. Very useful to be able to boot from your external drive.

PLUS A MACHINE CODE FREEZER MONITOR WITH EVEN MORE POWER!!

EVEN MORE FEATURES INCLUDING 80 COLUMN DISPLAY AND 2 WAY SCROLLING:-
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REMEMBER AT ALL TIMES YOU ARE INTERROGATING THE PROGRAM IN IT'S "FROZEN" STATE WITH ALL MEMORY AND REGISTERS INTACT - INVALUABLE FOR THE DE-BUGGER OR JUST THE INQUISITIVE!

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SPECIAL: ALSO 10 extra great games	ADD 25.00

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• Fun School 3 or 4, specify, under 5 years, 5 to 7 years or 7+ years. 12 stunning UK educational games with beautiful pictures, exciting animation and music that helps to develop number, word and other skills. Up to 6 skill levels. Conform to National Curriculum requirements.	24.99
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• Hobbyte Infant or Junior (specify) Educational Pack, featuring up to 12 "Learn while you play" games	19.99
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SPECIAL: Also with Cartoon Classics Games and Dpaint III instead of Dpaint II/Photon Paint II (1MB req.)
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• Hobbyte 30 Easy Children's Games, 10 pack disc including Train Set and other top entertaining PD titles	19.99
• 10 Blank Discs	6.99
• Joystick	9.99
• Deluxe Paint II/Photon Paint II or Elf or Puzznic	89.99
• Mouse mat	
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• Spellbound - 5 exciting arcade type games to develop logic, memory and spelling skills or any Fun School	25.99
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Animate like the

Ravi Swami provides the definitive guide to animation, along with some essential hints and tips on expanding your artistic horizons

Most of you will probably own some version or other of DPaint, one of the most versatile and simple to use graphics packages available for the Amiga.

Having said that, how many of you will have had occasion to put any or all of DPaint's numerous features to use, either during an animation, or as static Amiga art?

Initially we planned to release a complementary animation on the CoverDisk to help explain the finer points of the animation process. Unfortunately the arrival of SID 2 means that the release of the anim has had to be delayed.

As a result, to get the full benefit from the tutorial you'll have to wait for next month's issue of *AC*. To run the anim, you'll need a 1Mb machine and a copy of DPaint 3 or upwards.

When I set out to create the animation I was faced with a dilemma. The brief was to create a DPaint animation using as many different techniques as possible, employing DPaint as the centre pin.

Perception

First off, everyone's perception of animation is different. A superb piece of character animation could be done on DPaint, but for the purpose of a tutorial it would be pointless, since character animators have a whole host of tricks at their disposal that can't be found in any animation package, however comprehensive it may appear.

Designers of animated graphics and title sequences will insist that what they do involves animation, for example tumbling logos. Character animators would disagree by explaining they are merely moving things around, and so the general confusion goes on – well, that's my excuse...

At the outset, one thing becomes clear after tinkering with DPaint – you can create a lot of fancy effects in terms of a "look", regardless of whether you are enhancing existing DPaint animations by employing additional digitising with systems such as DigiView, or perhaps trying to emulate the look of video game graphics.

In the case of the demo animation, the intent has been to approach the look of something slicker than you'd expect to see from DPaint. The software allows you to do all sorts of crazy things that you'd expect to see in high-end systems such as Quantel's PaintBox – plus there's the added bonus of animation.

Believe me, I tried very hard to avoid the cliché of an animated logo when it came to arriving at an idea. However, after a lot of brainstorming – and the fact that I only had a week left to do the sequence! – the all-important idea seemed obvious.

I say "all-important" because anything you do has to start with an idea, hopefully providing you with an initial structure to create the animation around. OK, so superficially speaking the demo is basically a "tumbling logo", but how does its creation involve animation? Well, it's moving, and it exists within a predetermined time frame.

Basically you're trying to get something to go from A to B in a hopefully interesting and entertaining manner, as well as informing people that they should buy *Amiga Computing* instead of any other magazine – as if anyone needed telling.

Don't be put off by the fact that the demo is not of some cute animated person doing strange things – this is also possible with DPaint, but would take infinitely longer to produce and require much more pre-planning to execute. All the bits necessary to recreate or create your own animation will be available on next month's CoverDisk, comprising of a couple of IFF files. As a result, you can learn the finer points of the animation process this month and apply your newly-acquired skills with the assistance of next month's Disk.



Thankfully most software designers working on Amiga products have sensibly enabled users to load images created on a wide variety of other graphics packages – in this particular case I've used Imagine, the 3D ray tracing package from Impulse.

The only proviso is that images satisfy the rule of compatibility with the Amiga's standard IFF format. However, since the demo employs DPaint 3, which cannot accept 4,096 Ham images, the graphics created in Imagine had to be re-saved as 64-colour lo-res IFF files, using DigiView to do the re-conforming.

Challenge

Why bother, you may well ask, when you could originate everything in DPaint? In this particular case, the reason was that I set myself a challenge to try to see if you could achieve certain effects more quickly using another package – namely the appearance of solid objects, light and shade and so on, and then import those images into DPaint for animation purposes.

True, you can create a very convincing 3D effect in DPaint, if you have a rudimentary knowledge of how things should



look, and a few artistic tricks up your sleeve. Nevertheless I plumbed for Imagine and spent the next two hours setting it up to render a reasonably convincing relief image of the *AC* logo.

Once set up, and with the aid of numerous test renderings, I could change the lighting conditions, colours, bumpiness and so on in a way that, at best, would be difficult in DPaint. My only concern was that all this would be lost in the Ham to lo-res conversion process.

I was wrong... DigiView does an excellent job in re-computing a reduced colour palette and resolution for any image you may load into it.

The end result in this case was something that still looked remarkably realistic and solid. I rendered all the bits and pieces in Imagine simply because it was so quick and easy to do – this included the support columns of the Logo panel.

Different palette

When you do this with different objects, you will find that the colour palette saved will be different for each IFF file. This can be a nasty surprise when you load them into DPaint, but it's easily remedied by executing the ReMap function.

Any errors in the palette can be corrected by simply re-mapping all successive images so they match the entire collection of frames to the original palette.

The animation elements have been broken down into the background image and

➤

Power packages

The additional packages used in the creation of the demo were Imagine from Impulse and NewTek's DigiView. Both of these require a minimum of 2Mb of RAM to be of any use and of the two, Imagine is the most memory-hungry since it is a 3D package.

Obviously the ability to bring in material from other sources will extend the usefulness of DPaint in creating animated sequences. The DigiView package is just one of many that will allow you to grab images from any source, whether it be video camera or TV, saving them in a variety of resolutions.

These can then be loaded into DPaint and used as additional elements within your animations. If this approach is taken then it is advisable that some means of mass storage be found to handle the large number of frames that may be required for an animation.

Ideally this could be a hard disk, unless you intend creating everything as short cycles strung together, which soon becomes tedious.

One application I had occasion to use involved digitising drawings created by a traditional animator, which were taken into Photon Paint – a Ham paint package – along with some other material digitised in DigiView. The frames were then treated and given a look that would have been difficult to achieve any other way.

It is very difficult for computers to emulate the methods used by animators to create animation. Some 3D packages are able to implement processes like in-betweening or 'tweening as it's more often known, where the animator will set up key positions for a character or object, and the software will work out the intermediate frames.

In a 2D situation this is more complex, unless the 2D package involves what is called structured drawing, a type of vector-based drawing, which uses more memory than a package like DPaint.

At best, something like DPaint can figure out screen locations between key positions which you may define, but the object it moves will not change in itself.

Some recent packages allow you to draw images on successive frames for an animation and then, rather like traditional animators using a light box to see the drawing underneath, enable you to overlay a ghosted image of the previous frame on the current page you are working on. What it boils down to is that a large part of an animator's understanding is based upon an awareness of illusion, and the tricks of perspective, whereas a computer can only see things as logical absolutes.

For example, a computer can show you a cube that looks the way it looks in the real world, with diminishing perspective and so on, but to the computer it is simply a perfectly mathematical entity, without any of the distortions that arise from vision and point of view.

This leads rather neatly to the subject of 3D packages for the Amiga, which vary from ones which allow you to create simple 3D objects to others which allow you to generate entire universes in your bedroom.

Some 3D packages that I would recommend are Sculpt Animate 4D, which to some extent has been left behind by other ray tracing packages, but nevertheless still has some unique features. Perhaps the premier packages are Real 3D – which is what's called a solid modeller, and the excellent Imagine 2.0.

Since Real 3D is primitive-based, creating complex objects is more difficult than with Imagine, although the very latest version – 1.4 – does support very similar organic object modelling tools as Imagine, and like Imagine it's possible to load objects created in other packages into Real 3D in order to take advantage of its superior rendering capabilities.

Of the three, my personal favourite is Imagine, since it knocks spots off the others in terms of features. These include most kinds of surface mapping, a complex but powerful animation interface, and a sophisticated modeller.

All these packages require a fair bit of work in order to produce anything worthwhile, but the results can be stunning – especially considering the price.

No package is going to do all the work for you in any case, and where animation is concerned it's best to do some pre-planning before you even decide which package is best suited to your needs.



Freeze frames from Ravi's anim, showing just what can be achieved with DPaint and some additional software

professionals

the foreground panel, along with support columns and assorted additional objects.

I anticipated my sequence being a 25-frame cycle. You will see a lot of "cycles" in Amiga PD anims, simply because they can be very effective and look like a lot more work than is actually involved. If the timing is correct they can have an almost hypnotic effect.

The actual animation part of the sequence – once I had prepared all the actors (or mobile elements) – employed functions which for the most part are to be found in the Anim/Move requester.

Before I go on, I should explain that, depending upon the complexity of your scene, like traditional animators, its a good idea to pre-plan the in and out points of actors, and the duration of cycles on paper.

Dope sheets

Animators use what are called dope-sheets which are divided up into frames, onto which all the different levels of animation can be entered on a frame-by-frame basis.

The Move requester is an extremely powerful means of controlling animated effects in DPaint, and because parameters are entered numerically, they are infinitely more accurate than, say, using the Left Amiga key and dragging a brush around manually – a technique which has its merits, but would require an entire additional article to explain in full.

It's a good idea to build animations from the back up, ie the furthest away element first and then successive levels, in rather the same way that traditional animation is done. This is because you are dealing with a two-dimensional medium.

If you don't do this, then its almost impossible to correct mistakes without rebuilding the sequence from scratch – saving each level as a separate anim is one way around this.

In our example anim, the background had to scroll continuously and the foreground spin. As a result, a layered construction was ideal for the job.

The first job in the creation of any DPaint-based anim is to enter the anim length into the appropriate requester, and ensure that frame one is the current screen.

I loaded the background image into the "scratch" screen next, accessed using the J key, and then cut out as a brush.

The brush was then carried over into frame one and stamped down so that it filled the entire screen. At this stage, I entered the Move requester. Since the animation was to move from left to right, I entered a positive value in the X box.

You can preview the move by hitting Preview and then OK, after which a ghosted grid performs the move, showing the start and end points and every position in between.

Once this is over, the Move requester reappears and you can make adjustments, or commit yourself to the move by selecting Draw, which actually initiates the creation of the animation frames.



Ravi's original backdrop in all its glory. With one simple linear movement it instantly comes to life

Useful gadgets

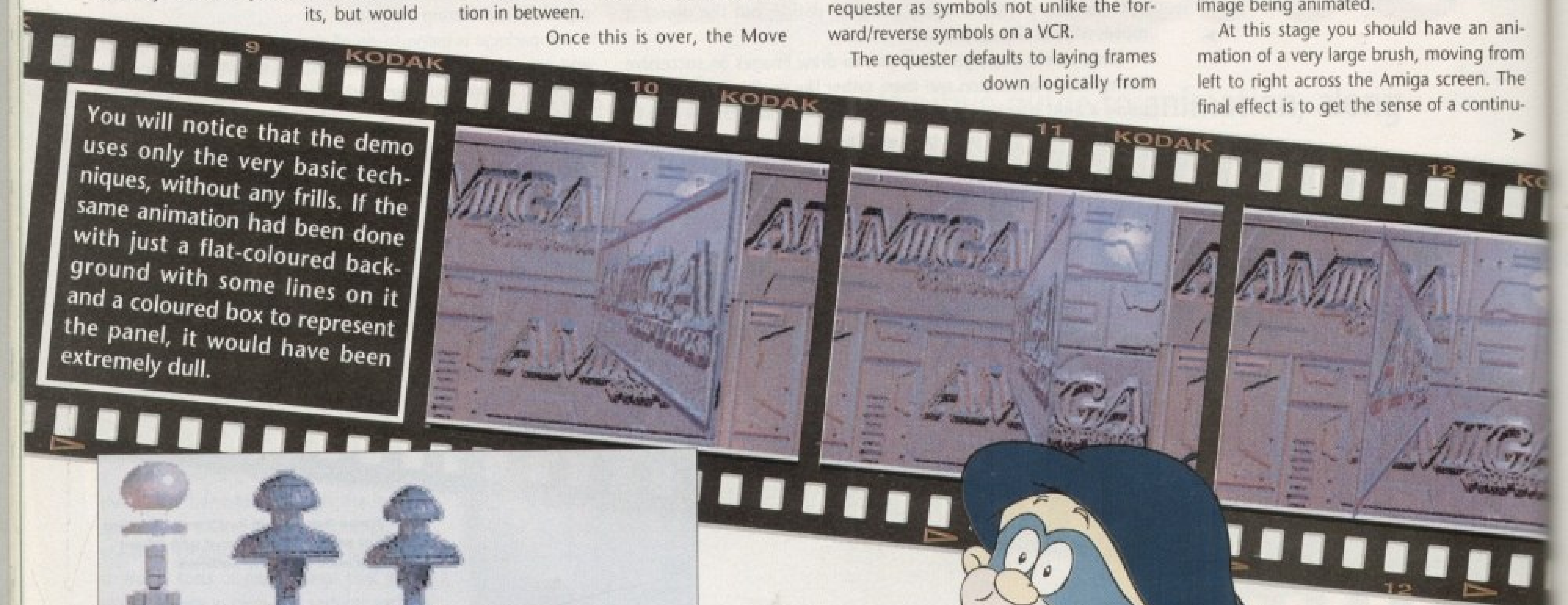
Two very useful gadgets in the Move requester control the way in which frames are laid down before Draw has been selected. These have no name as such, but are depicted graphically at the right of the requester as symbols not unlike the forward/reverse symbols on a VCR.

The requester defaults to laying frames down logically from frame one upwards, and if you have followed the previously outlined procedure, you should have a smoothly scrolling panel going from one end of the screen to the other – depending upon the X value that you entered.

Assuming that most people trying this are not going to have more than 1Mb of RAM to play with and do not possess a co-processor, speed of playback is dependent upon the amount of RAM available, and also the size and changes within the image being animated.

At this stage you should have an animation of a very large brush, moving from left to right across the Amiga screen. The final effect is to get the sense of a continu-

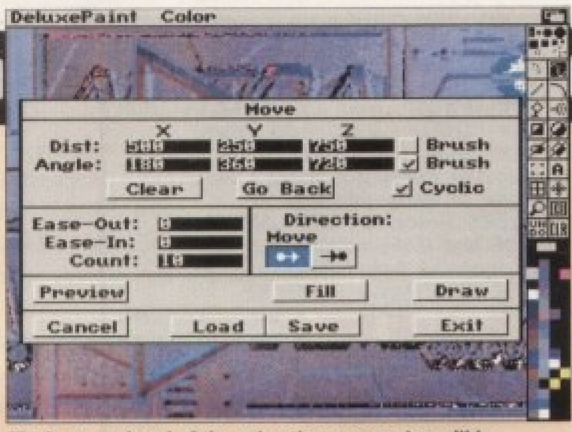
You will notice that the demo uses only the very basic techniques, without any frills. If the same animation had been done with just a flat-coloured background with some lines on it and a coloured box to represent the panel, it would have been extremely dull.





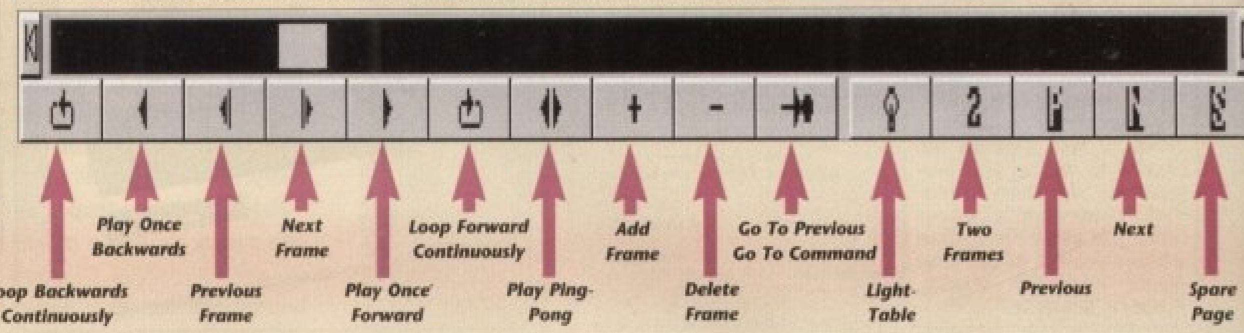
A selection of additional tools all supplied free of charge for all you would-be animators out there





The heart and soul of the animation process. Incredible power often ignored by the average Amigan

Animation made even easier with the latest addition to DPaint's anim control options...



ous scrolling background. Re-entering the Move requester finds the forward/reverse symbols previously mentioned. You then change the leftmost symbol to the one next to it – an arrow with a dot on it.

You then go to the group of three symbols and change the highlighted arrows – pointing right – to the ones pointing left, ignoring the symbol in the middle which looks like two vertical lines.

Preview

If you hit the Preview button, you'll see the animation in reverse, but no ghosted grid – this is because you have not yet stamped down the brush.

If you do by chance hit Draw at this point, the new move will be created from the last frame of the previous move. To create the move seen in the demo, go to the very last frame of the animation and stamp the brush down so that it butts right up to the edge of the previously laid down brush.

Going back to the Move requester and hitting Preview verifies that the animation is now to be laid down in reverse.

A note here – always use Preview before committing yourself to any predefined move, just in case it is not quite right, as the Draw function is not Undoable.

A value of approximately 230 units should be in the X box for this to work as a continuous scroll, but I have purposely avoided giving an exact figure since it is best to employ a bit of trial and error to see exactly how the Move requester works.

Under the directional boxes for each axis, at the top of the Move requester, are boxes for entering an angle value. This refers a perspective value for either the X, Y or Z axis, and can produce some stunning effects, not unlike DVE or Digital Video Effects, seen on TV, when used alone or in combination.

These were used, in the Y axis, to create the spinning *AC* logo on the next level of the animation, by cutting the Logo out as a brush, as before, and then placing it in the centre of the screen over frame one of the background animation.

For a beginner, the end result of the above should provide some idea of what you can achieve using DPaint's animation tools. The demo example, however, includes some animation which uses DPaint techniques to simulate 3D motion using 2D images, namely the panel supports.

This took some time to create – about three hours – but really only employed the Size/Stretch function on a brush, and used the edge of the animated panel as an anchor-point for the animation. It shows that with a bit of careful fiddling about and tweaking, some interesting effects can be achieved.

The IFF files included with next month's demo include some other brush images which you can use in other anims created using the base elements supplied.

For example, try using the Move requester to plot non-linear motion paths, or use the Z axis to make objects seem to travel towards or away from you. Interesting animations have as much to do with timing as anything else.

Following the above very basic outline, things would certainly move, but in a very linear and even manner – if everything moved like this it would be very dull.

Two additional and very useful functions exist within the Move requester. Ease In and Ease Out enable you to enter what are called Cushioning or Fairing values to an animation over a period of frames which you define numerically.

Objects in the real world accelerate and decelerate, and this speeding up and slowing down can help to lend weight to a move, as well as reducing the effects of strobing, when objects move too fast.

Interestingly, they can also be used in conjunction with the angle values in the Move requester to cushion 3D rotations, as well as moves along any of the axis.

Form and motion

The point of the animation was, in part, to suggest that you can enhance an interesting image with movement, and that very often if the image is interesting enough, you can get away with a very basic motion.

Conversely, a very simple, bland shape could be given enormous character by virtue of the way it is made to move.

A drawback of animation on the Amiga is memory, so it's always a good idea to see how to work around such constraints economically, and still arrive at interesting solutions.

In writing this article, I have deliberately avoided some of the finer points of the DPaint software, like the use of the Function Keys 1 to 4, which enable frame-by-frame advancement of the animation, playback and, in the case of the 3 Key, advancing to any frame in the animation, since most users of DPaint should be familiar with them.

DPaint is a versatile package for producing 2D animations on the Amiga. To get the best out of it you need a lot of memory and speed, as is the case with most graphics applications, which are very memory intensive. So raid that digital piggy-bank. Now!

Conversing with the professionals

One issue that occasionally crops up is that of the compatibility of the Amiga with professional broadcast quality equipment. This may not affect most users of Amigas, who will at best be transferring their work to domestic VCRs. However there are those – like myself – who have occasion to use their Amigas in a professional capacity.



The fact of the matter is that it's possible to transfer Amiga graphics to any type of broadcast quality tape, from U-Matic to 1in Digital, with excellent results, depending upon the ingenuity of the facility you may be using to do this. One essential piece of equipment you will need to do this is a genlock, which, funnily enough, you could win in this month's competition on page 34.

A genlock is not a frame grabber as some have been led to believe, although some frame grabbers incorporate genlocks. The more expensive they are the better they are is the general rule where genlocks are concerned.

As a general example of the kind of procedure involved in using Amiga animation in a broadcast context, I recently used the Amiga to produce a short sequence for an MTV insert.

Starting with some traditional animation, this was digitised and saved as hi-res DPaint files. Once in DPaint the animation was treated in various ways and then saved to floppy disk.

The completed animation frames were then transferred onto High band U-Matic tape as a series of stills, which were subsequently taken into Quantel Paintbox for compositing at a much higher resolution than the Amiga, before finally being transferred to Betacam SP tape via a LaserDisk.

This is one of many possible routes you could take to get your animation out of the Amiga. If all of the above seems a little too complex, you could always stick to using DPaint and saving short animations to disk for playback on other peoples' computers, or alternatively wait until CD video takes off, as it will, and take advantage of its high quality and interactiveness...


3D



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the DISK



Timm Martin's SID version 2 has been the most eagerly anticipated piece of Amiga shareware for the last two years, and now it's here exclusively on this month's *Amiga Computing* CoverDisk

On this month's Disk you will find the result of two years' work, 2,300 hours of programming and over 2.9 million bytes of code – Timm Martin's SID2.

Just stop and think for a moment exactly what it is we're giving away free, then recall the now much maligned shareware principle which states that an author should not suffer for his or her honesty, but be rewarded for a great deal of work.

SID2 is a shareware product, and its registration fee is a suggested US$25 (about £15). The unregistered version of SID2 you now own is identical in all respects to the registered version except that it will not allow you to save out your preferences.

As the program is one of the most configurable ever designed, and as tailoring it to your particular needs is half its power, you should by now be scribbling out those US money orders and posting them to Timm Martin, whose address can be found in the on-disk documents or by selecting the information option on SID2's Program menu.

On with the show! Your first job as a SID user is to decide which version is best for you. There are three on the CoverDisk – one each for Workbench 1.3 and 2.04, and SID2 Personal for users of half megabyte machines. Select the SID of your choice from the ShortCut menu and away you go.



Select files by date of creation to save time and hassle



Click on Protect, choose your flags, and a file can be saved from deletion in an instant

Standard layout

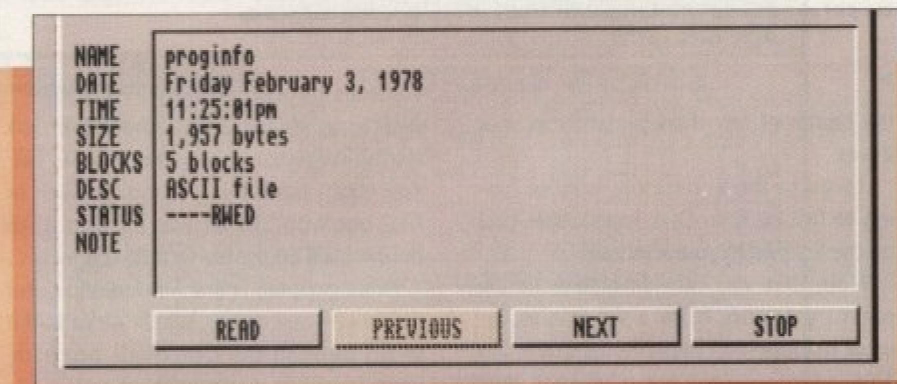
When the program has loaded, you will see the by now standard layout for a directory utility, including a title bar, two large listing windows, and several rows of command buttons at the bottom.

Owners of most directory utilities, especially those used to SID 1.06, will be instantly comfortable with this screen and will need no further introduction, especially as there's 200k of online help files to keep you going.

For those of you who've never used such a program, I'll run through a general outline before we launch into a blow-by-blow look at SID2's features.

Take a long look at the screen and try to familiarise yourself with the layout, paying particular attention to the command buttons below the two main windows.

These are almost all dedicated to actions which will only work on selected files, none of which you will have at the moment, as you haven't yet loaded a directory listing.



The handy Info panel can be accesed by a double click on the file of your choice

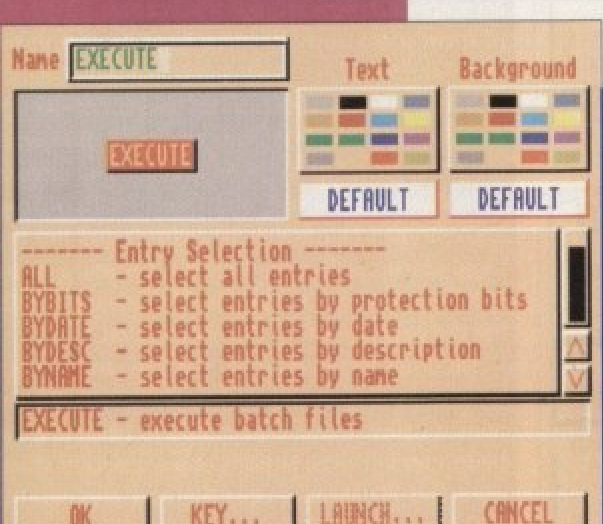
To do this, click on the button on the top row – just below the directory window – marked DF0, and a listing of the root directory of your CoverDisk should appear after a bit of disk whirring. The top half of the list will be in orange and the bottom half in white, which is the colour setting used with our configuration to denote the difference between directories and single files.

If you want to pop into a directory for a quick nose around, just double click on it and the display will change to the directory contents.

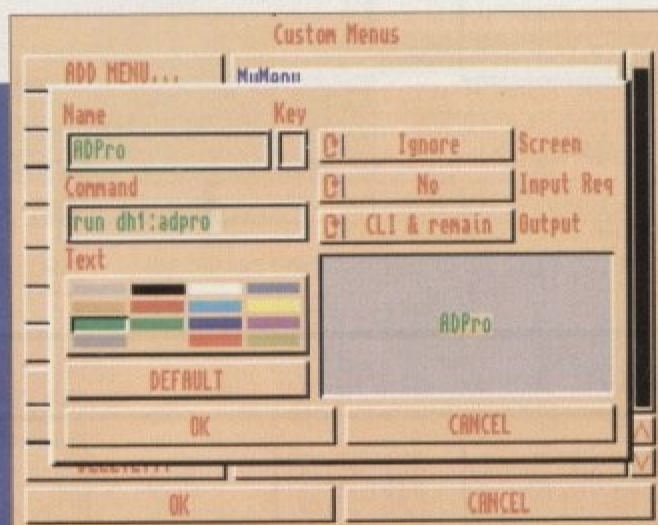
To move back out of the directory, move the mouse pointer to the outside edge of the window as far as it will go, click the left mouse button, and the parent directory will appear.

Jumping straight to the directory of your choice is even easier. Look along the top row of buttons until you see one marked VOL, and click on it with the left button. This is the volumes button and will list all the legitimate volumes your CoverDisk contains along with any aliases set up since the disk booted.

At the moment, you'll see just C:, DEVS:, FONTS:, L:, LIBS:, S:, and T:, and



Click left-Alt or select Prefs to edit any button you like

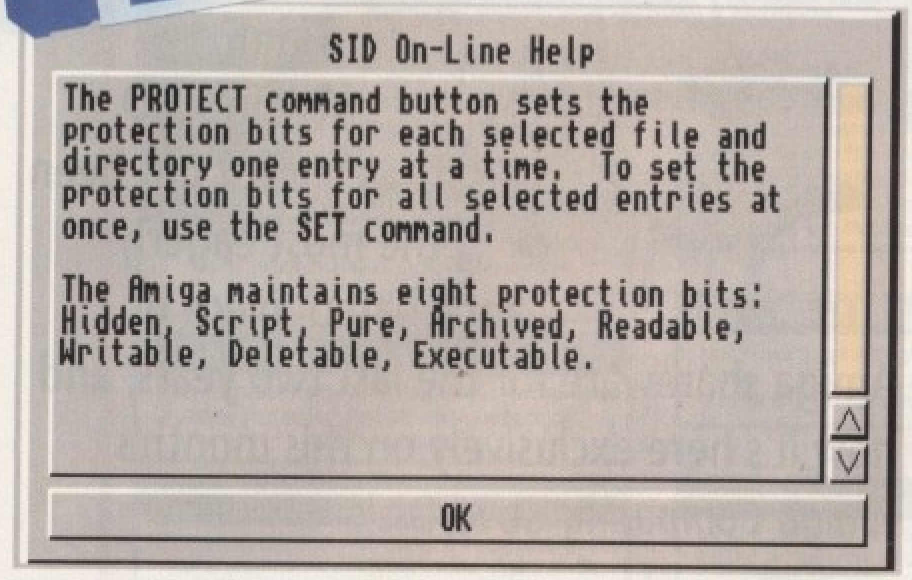


Create your own custom menus from SID2's powerful Prefs menu





Click on the bottom message bar to re-order your directory entries



Use Ctrl and a mouse click to summon SID2's all-encompassing online help

The personal touch

With all its help files, doc files, and so on, SID2 can take up the best part of a floppy, so you might be thinking "what use is that to someone like me who uses a single or dual floppy system?". Never fear, SID2 Personal is here.

SID2 Personal is a cut down version of SID without the Load and Edit Prefs option which runs in 512k and takes up a lot less space on your floppy. We might have to distribute SID2 with all the related Help and Doc files, but there's nothing to stop users scrubbing them from their own system disk once they've mastered the use of the program.

Having disposed of the 200k help file and the docs, a crunched SID2 Personal will leave plenty of room on your Workbench disk for programs of your own.

The procedure for setting up SID2 Personal on a fresh disk is fairly straightforward. Just boot up SID and use it to copy the following files to your new disk:

SID2_Personal
SID2-Personal
SID2-Personal.info
Quickprefs
Quickprefs.info

Now make sure you copy ICONX to the C: directory of the new disk – if it's not already there – and all the SID2 Prefs files found in the S: directory of your CoverDisk.

If you don't want the help files and doc files, that's it, but please remember that if you give a copy of SID2 to a friend you should always pass on the full doc, distribution, and help files.

➤

the names of any disks presently in your drives.

To go to the S: directory without having to first click on DF0, just double click on the S: listed in your window.

Note that you can jump back to the parent directory from a volume in the usual manner – an improvement over SID 1.06, which wouldn't know where to go if you had originally dived in through the volumes button. While we're in the S: directory, let's examine the CoverDisk startup-sequence to see what it looks like. You might think this is a job for Shell or CLI, but with SID all you have to do is double click on the file – so do it now.

What happens is that SID looks in C: for the MMPP text reader, which we've told it to do through the QuickPrefs program, then loads it along with the text file you've double clicked on. Press the Escape key for now to get out of MMPP and double click on the file SID2.config. Unlike the text file we've just looked at this is a binary file, which SID recognises as such and just pops up an information panel with details on the file's size, datestamp, protection flags, and so on.

If there was a hex editor in your CoverDisk C: directory, you could click once on a binary file then on XEDIT to examine a file's hex listing. There wasn't enough room on the CoverDisk to squeeze in many of the utility programs you'd normally want to control through SID2, but if you register with Timm Martin you will receive the fully configurable version and can then set it up to use the programs at your disposal.

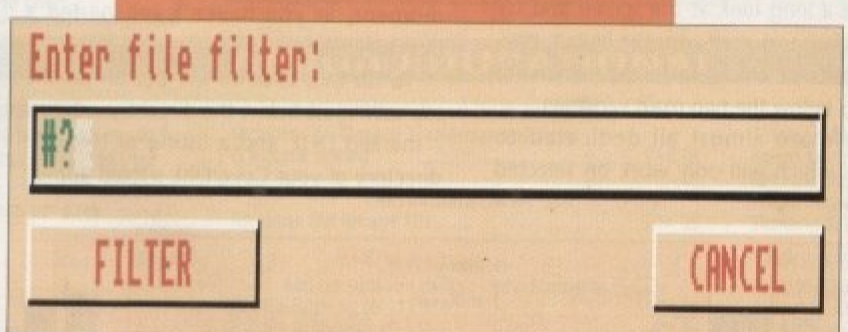
Utilities such as PPShow, for viewing normal and crunched IFF files, the NewZap hex editor, QED text editor, and ➤

Faulty Disk?

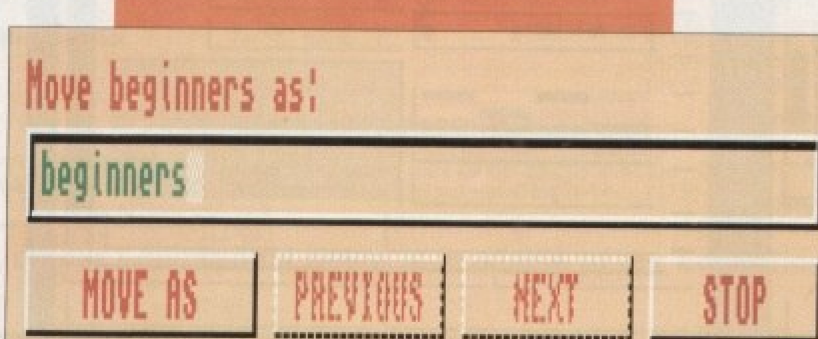
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Files can be selected using wildcard to grab a bunch in one go



Move and rename in one go

The competition

Since the release of the original SID, the number and variety of directory utilities available for the Amiga has gone through the roof.

Most of these followed the general SID layout and attempted with varying degrees of success to accomplish the same tasks, but until recently none of them could oust SID v1.06 from its spot at the top of the heap.

TDM, as distributed on a recent *Amiga Computing* CoverDisk, was the first shareware release to beat SID v1.06 on functionality, presentation and ease of use, and Directory Opus from INOVAtronics (a commercial release) was the first to go one up on power, though it became a virtual SID clone in order to do this. The release of SID2 has put paid to most of this competition.

No other directory utility has the range of features and the complete configurability of SID2, and none is easier to use. Expect SID2 to become a star performer in the collections of most decent shareware and PD libraries over the next few months, but remember that this excellent utility made its European debut exclusively on the best Amiga CoverDisk in the business.

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a host of others are available through PD and shareware, none of which you'll have to use through CLI as long as you configure SID properly.

Timm has made the new user's job as easy as possible by including a 200k help file which you can access directly from SID2.

If you are confused about the function of any of the buttons or menu items, just hold down the Ctrl key and click on the offending button or select the troublesome menu item and a help panel will appear with a full description of the item in question.

This feature can't be too strongly emphasised for the first time user, and to give yourself a full guided tour of SID2 conducted by the author of himself, I'd recommend you hold down the Ctrl key and click on everything in sight. After ten minutes you'll be well on your way to becoming a SID2 expert user.

Configuration

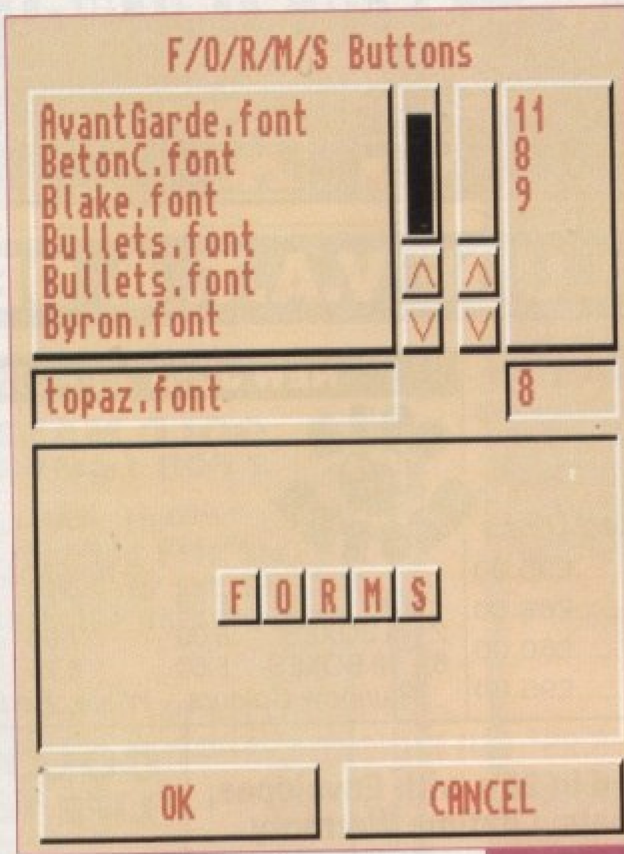
Now for the fun bit. Configuring SID has always been the route towards complete system harmony and the sort of warm inner glow previously only available after a rousing bowl of certain breakfast cereals, but with SID2 it has assumed Zen-like proportions.

Tailoring SID to seamlessly interact with your existing system has never been easier or more completely possible, though if you only have a 512k machine and are using SID2 Personal, you'll be unable to change any Preferences settings.

The rest of us should by now be holding down the right mouse button and selecting Edit Prefs from the program menu. You should see seven sub items, one each for Buttons, Colours, Configuration, Fonts, Layouts, Menus, and Path.

The topmost selection – End – will finish your Prefs editing session. To begin with, we'll make a few simple changes to the colour scheme, so select Colours and release the right mouse button.

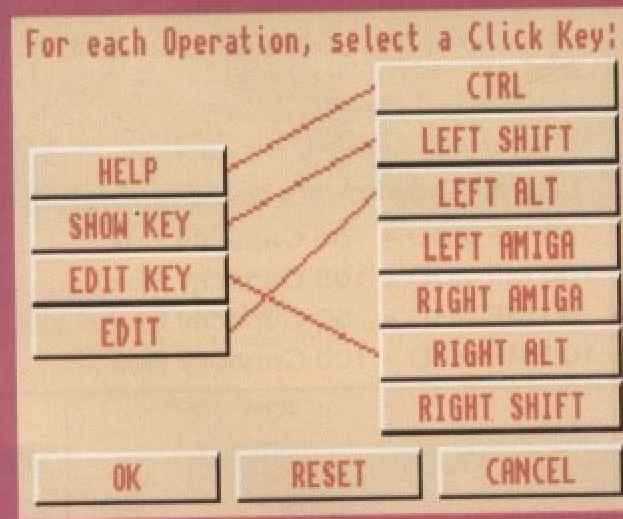
At first it would appear that nothing has happened, but if you look at the message strip right at the bottom of the SID screen, you'll be told to "check out



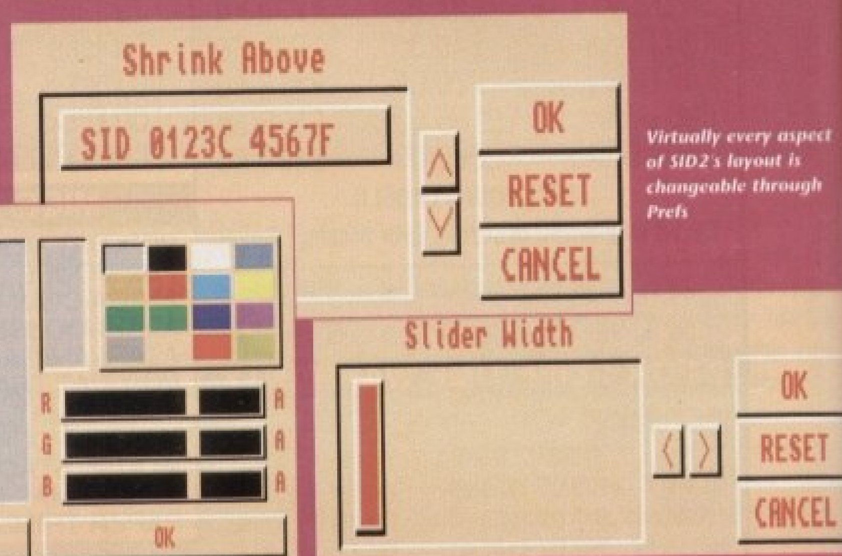
Choose any font you have avalble to customise your SID2 screen

For those with a hard drive, SID's ability to change to suit your precise needs means it can replace every menu and directory utility you have, and even Workbench itself.

No two copies of SID2 need ever be alike once the user has fiddled with the Prefs setting.



Configur... Hotkeys... your ow... taste



Virtually every aspect of SID2's layout is changeable through Prefs



Configuring SID2

As there are so many configuration options open to the user, it really is down to your own personal tastes and needs as to how unique your own copy of SID2 becomes. By way of a few pointers, however, here's a run-down of the most useful Prefs options.

- Buttons – The two button banks contained in the release version of SID, selectable by clicking with the right mouse button anywhere in the button bank area, contain many buttons whose functions you may never use.

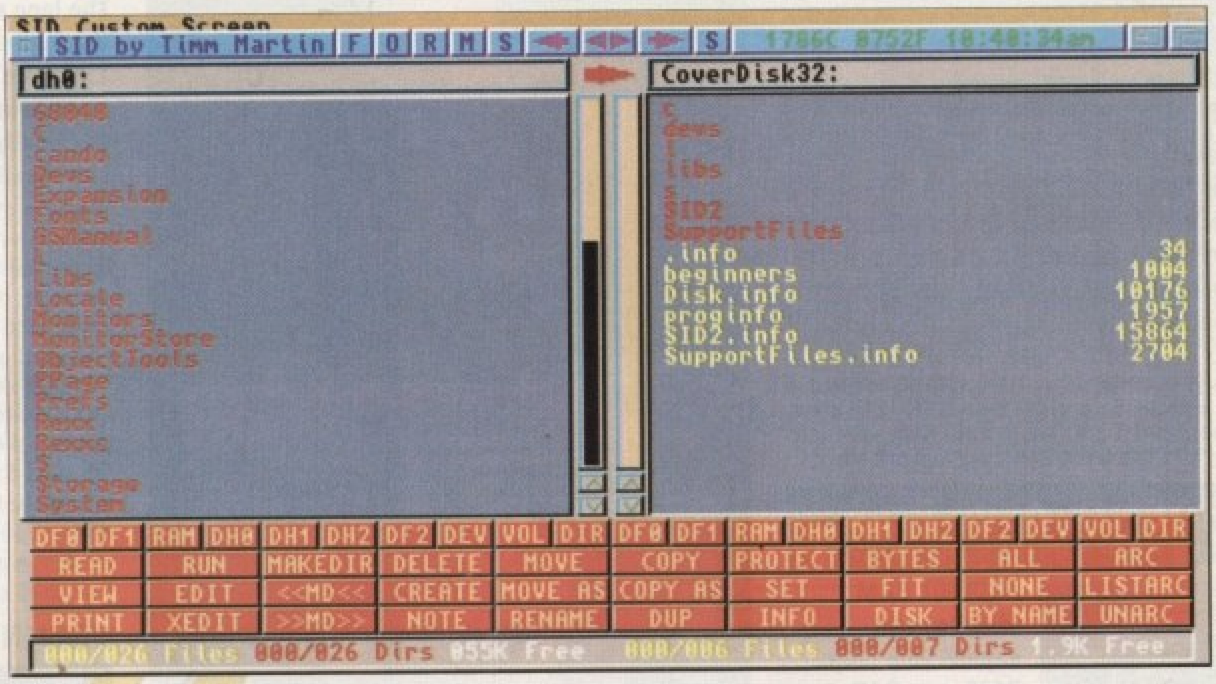
Setting up your own buttons or swapping and changing those already defined is easy. Just select the Edit Prefs/Buttons menu option and the comprehensive button editor pops up.

Try the Swap and Move functions to start with. These can be handy to cluster your favourite buttons in one part of the bank or to move the lesser used buttons to the bottom row. To add extra emphasis, try changing the colour of the vital buttons.

- Custom menus – Selecting the Edit Prefs/Menus option you can add your own menu system to SID2 capable of running your favourite programs in an instant.

These will use any of SID2's built-in commands or can be set to launch external programs, which is ideal for users of hard drives.





SID2's main screen in custom 16-colour mode

the menus", so hold down the right mouse button once more and you'll see that there's now an extra menu entitled Colours.

This menu has a long list of options for exactly which parts of the SID environment you'd like to tweak for colour coordination, so choose one at random.

No matter which one you choose, a palette requester will pop up with the various background, text, and menu colours you can choose, a sample of your choices in the middle, and the standard colour boxes with palette sliders on the right-hand side.

As the SID on your CoverDisk has been configured to open on a Workbench rather than a custom screen, the colour sliders won't work, but you can always change the preferences to make SID open on its own screen with its own distinct colours if you feel the need.

Remember that unless you register with Timm Martin, any changes you make will be lost when you turn off your Amiga.

Quit out of this section after making your changes then choose the Edit Prefs/Buttons item to bring up probably the most powerful and flexible part of SID2.

Customisation

You may have noticed that by clicking with the right mouse button anywhere in the button bank you toggle to a second bank of buttons with more available commands.

What you may not have realised is that you can design as many different button banks as you like or swap and change the existing banks to put all your favourite commands and actions in the same place.

Most of this complex section is explained in a straightforward way using the Help function, but for confused users we'll take a quick stroll through some of the features.

The first panel you'll see is the bank control panel, offering various options to insert a complete bank, delete or edit the current bank, or move, copy, swap, and edit individual buttons.

To begin with a single button, click on Swap then on the first and second buttons in the bank that you'd like to swap positions.

Now try Move, and you'll notice that when the operation is complete you have a blank space where the button used to be before you moved it. To get to the really sticky bits, click on Edit then on this blank button.

A much more involved panel will appear in front of the Bank Control Panel which enables the user to specify exactly what a button is called and what it does when clicked on. In the middle of the panel is a scrolling list of internal SID commands which can be attached to the button, and above this is the usual colour/text editing section.

After naming your button and choosing its colours, hold down the Ctrl key and click once on the scrolling list of commands to summon SID's online help.

Probably the best way to find out about each function is to assign it to a blank button, click on OK until the button appears in your button bank, then click on the new button with the Ctrl key held down.

The Help file will tell you as much as you need to know about the function you've assigned to the button, and if you decide it doesn't do what you wanted it to, you can always edit it again.

Note that once you're back in the main SID screen, you can edit a button by simply clicking on it while holding down the left Alt key. This produces the button editing panel, and holding down the right Alt while clicking on a button will enable you to set the button's keyboard short-cut.

Experimenting

We have, of course, merely scratched the surface as far as SID configuration goes. The program can be used as a simple directory utility or can be totally configured to virtually run your hard drive for you – the choice of how far to go is yours.

Only by experimenting and messing about with all the preferences settings can you fully understand how powerful a tool SID can be, and as the Preferences settings will not be saved out in this unregistered version, you can happily play away safe in the knowledge that your SID copy will not be corrupted or permanently messed up by tinkering.

If you reach a configuration you are happy with, including custom buttons, a 16-colour screen, and all the rest, just send your registration fee to Timm Martin and get your paws on the registered version to make those changes permanent. AC

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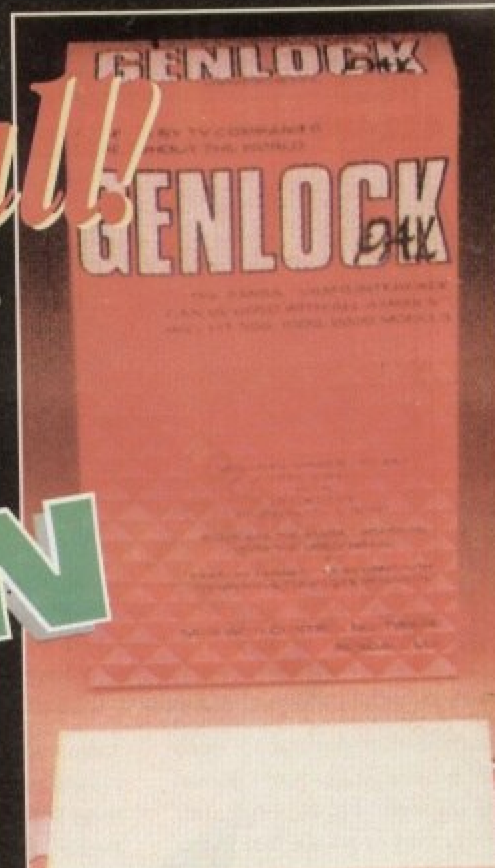
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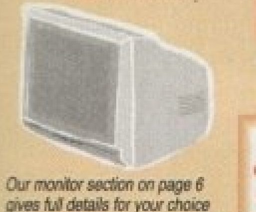
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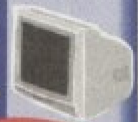
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HARWOODS AMIGA
PRO-GEN
NEW LOWER PRICE



PROFESSIONAL QUALITY GENLOCK FOR COMPUTER AND VIDEO MIXING, AT A DOWN TO EARTH PRICE!!!

Please note the above photograph shows Spectracolor which has now been replaced by Photon Paint 2.0

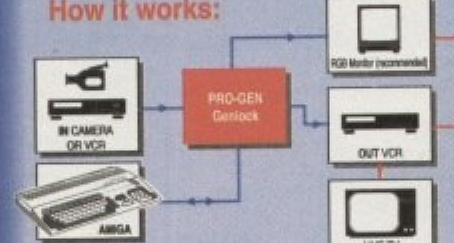
PRO-GEN Amiga Genlock

The Pro-gen AMIGA Genlock allows you to mix your Amiga display with any PAL video signal whether it is from a VCR, Laserdisk player or a Camcorder. In fact any item of video equipment which outputs a PAL composite video signal.Combined with the Amiga computer the Pro-Gen gives you the facilities of a special effects & video titling suite. Take your own films & give them a professional look by OVERLAYING TITLES or by SUPER IMPOSING YOUR OWN GRAPHICS created in packages like Photon Paint 2.0 or Deluxe Paint. Pro-Gen is supplied with micro illusions superb Photon Paint 2.0 package.

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- Paper park with auto single sheet loading
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- Complete paper parking facilities.
- Supplied with mono & colour ribbons
- Full 2 Year Citizen Warranty

NEW 24 Pin CITIZEN SWIFT 24E COLOUR - 180/60 cps — £319.95
Brand New, superb specification colour 24 Pin printer.
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- Push/pull & bottom tractor feeds
- Complete paper parking facilities.
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- virtually silent, 43dba
- Will print transparencies
- 12 Months on-site warranty (UK Mainland)

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A4 Laser Printer, will connect to PC, Amiga, Atari ST, Macintosh etc.
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- Appletalk for connection to Macintosh
- Every desktop publishers dream

SEE OUR LIST OF ACCESSORIES FOR BOTH STAR AND CITIZEN PRINTERS, ALL AT COMPETITIVE PRICES!

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PRINTER ACCESSORIES

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Citizen 120D+ Parallel Interface £49.95
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Citizen 124D 32K Buffer £13.95
Citizen 124D Semi-Auto SheetFeeder £39.95
Citizen 124D Automatic Sheet Feeder £79.95
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Citizen Swift 24 Semi-Auto Sheet Feeder £39.95
Citizen Swift 24 Automatic Sheet Feeder £79.95
Citizen Swift 24 Printer Stand £24.95

Citizen Swift 24X Auto Sheet Feeder £139.95
Citizen Swift 24X Printer Stand £34.95

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Automatic SheetFeeder £74.95

Star LC24-10 Mono Printer
32K Buffer £67.95 £67.95
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Star LC-200 Colour Printer
Automatic SheetFeeder £74.95

Star LC 24-200 Mono/Colour Printers
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Star SJ48 Printer
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Star XB 24-200 Colour Printer
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128K Centronics Printer Buffer £89.95
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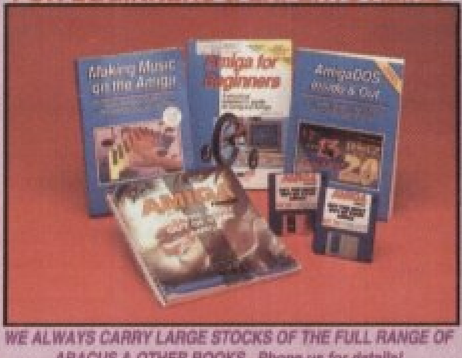


GENUINE CITIZEN & STAR REPLACEMENT PRINTER RIBBONS

PRINTER	PRINTER TYPE	BLACK RIBBON	BLACK RIBBON 'SIX PACK'	COLOUR RIBBON	COLOUR RIBBON 'SIX PACK'
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CITIZEN 124	BLACK ONLY	£4.95	£24.95	N/A	N/A
CITIZEN SWIFT 9	BLACK/COLOUR	£4.95	£24.95	£16.95	£99.95
SWIFT 24/24E/224	BLACK/COLOUR	£4.95	£24.95	£16.95	£99.95
STAR LC10*/20☆	BLACK/COLOUR	£4.50*☆	£24.95*☆	£6.90*	£36.50*
STAR LC200	BLACK/COLOUR	£6.95 ZX9	£36.95 ZX9	£12.95 ZX9CL	£69.95 ZX9CL
STAR LC24/200	BLACK/COLOUR	£8.95 Z24	£49.95 Z24	£14.95 X24CL	£74.95 X24CL
STAR XB RANGE	BLACK/COLOUR	£8.95 Z24	£49.95 Z24	£14.95 X24CL	£74.95 X24CL
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Soft cells

Part-time number cruncher and lumberjack Phil South checks out the best in the exciting world of spreadsheet programs. It's a man's world, accountancy...

You know, it never occurred to me until now to get a spreadsheet program. Life's too short to start messing around with cellular calculation engines, right?

But alas, there comes a time when every man must come to the aid of the party, and besides I drew the short straw, which meant I had to look at these things if I liked it or not. I'm a professional. I'll rise above it.

After getting all the programs in the post, the first thing that struck me was the lurid packaging that most of the companies had chosen for what is, let it be said, a boring but necessary product.

"OK, so it's boring inside, but check out the wrapper, dude!" they seem to say. The second thing which caught me completely by surprise was, in fact, how interesting a spreadsheet is when it's powerful and easy to operate.

In case you've had your head in a bucket of cement for the last ten years, spreadsheets are the computer equivalent of the kind of accounts books you see in WH Smiths, where you fill in all your figures and miraculously reach a grand total.

Easy, right? Wrong. What happens if you write a figure incorrectly or add up the same number twice? You have to rub out all the figures that this affects, and add them up again. This paper and pencil approach slowed down the progress of accounting for centuries, and still does in certain quarters.

Now we have spreadsheets, which take your accounts onto a grid on the screen, and this time when you change a figure all the others relating to that figure change automatically, like a lot of little numerical dominoes falling over.

Each figure on the grid is said to be inside a "cell", and inside that cell you can have a number or even an invisible calculation which is applied to other cells, the answer being printed in the current cell.

It's very neat, and even if you think you don't like this sort of thing, it can be almost as addictive as a game. A fairly mathematical and pointless game, but a game nonetheless.

Let's line up the contenders and see what they've got. A surprising turn-out for this match, with most offering some kind of presentation graphics, and no discernible bugs in any of them, at least for the test period.

KSpread 4

Kuma • £105.75

This is the big one. I knew this before I even clapped eyes on it, as everyone I spoke to about spreadsheets asked if I'd seen it.

They all said the same thing: "Well, that's the one." So what did Kuma do to this program to get it such a stonking good reputation?

Well, they loaded it down with features for a start. The first thing you notice when you open the box is the size and weight of the huge, baffling manual. Sure it's nicely presented, but not as nice as the manual for a product like Wordworth, for example.

OK, so it's not slickly produced, but all the information is there if you need it. And you will.

When you first start the program – remembering to run the Install program first, to install the tiny fonts that the spreadsheet uses – you get a feeling for its power right away.

When you start the system you see that KSpread has its own desktop. Icons for the various menu items are arrayed along the side, and menus are along the top title bar. Buttons for regularly used functions are in a row along the top, and the spreadsheet grid sits there blinking its cursor, waiting for your numbers to crunch. You can reorganise the desktop to suit you, and after you've done it you can save the results so your default setup will always pop up when you boot the program.

One thing you will notice straight away, if you have ever used the Atari ST, is that the alerts and graphics bear a striking resemblance to the ST's Desktop, and there's a sound reason for this. The program was clearly designed on an Atari and ported over. But don't be put off by this.

The impression of latent power isn't diminished when you start pulling down menus and pushing buttons. You can tap the cursor keys or click on the right cell using the mouse, and you can also select a range by holding the mouse button and moving the mouse down or across a required range of cells.

Almost all the functions are duplicated in buttons and menus, from toggling absolute/relative to loading a new spreadsheet.

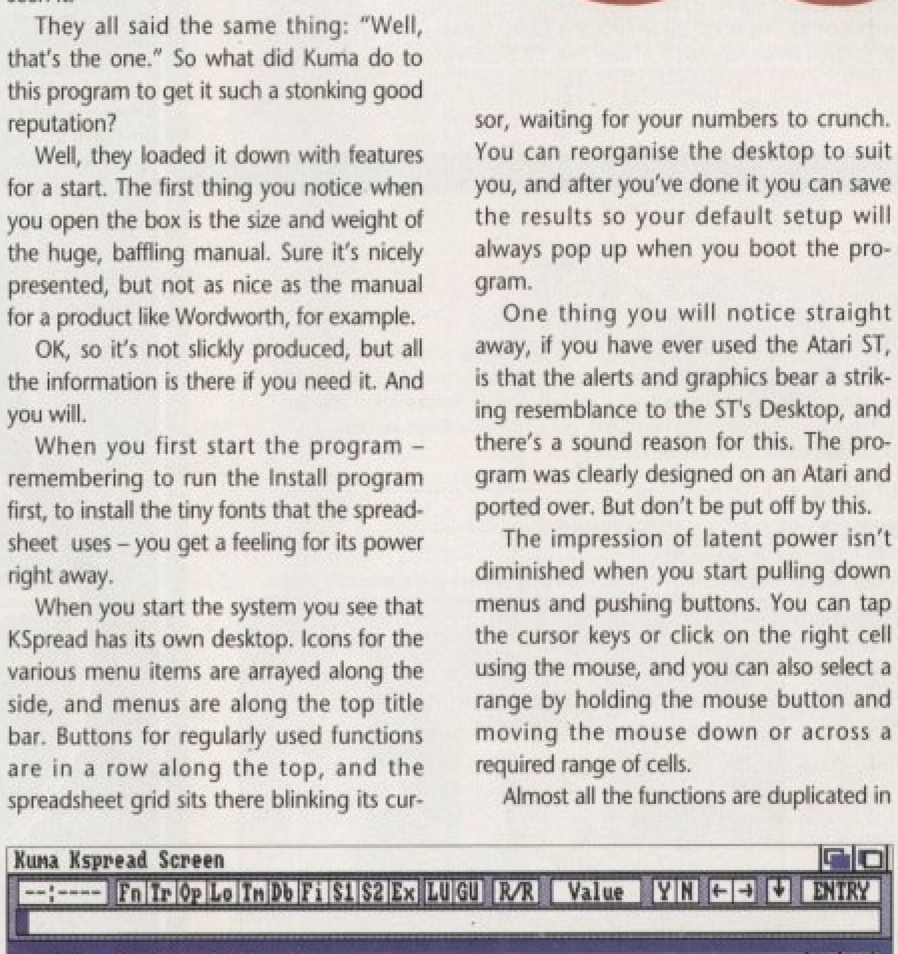
KS4 also has some very useful tricks up its sleeve, like the ability to load in Ascii files as data. So if you have a file like this:

```
data     465.99    467.88
data2     65.95     47.00
```

you can load this as Ascii into the spreadsheet, and it's just spooled in as it comes – the word "data" will be in cell A0, the number 465.99 in cell B0, "data 2" in cell A1 and so on.

Once the strings have been loaded, they are parsed by the program to interpret them as labels or numbers. This is a good way of importing data from non-compatible systems, as simple Ascii dumps of the data.

KSpread has too many features to mention here, but suffice to say it's the king of the heap. Its database functions and extensive import and export routines to Lotus 1-2-3, Data Interchange Format (DIF) and DGCalc – *from* but not *to* in the latter case – ensure that it would be just as at home in the office as in the home.



Ease of use
●●●●●●○○○○

Graphics
●●●●●○○○○○

Compatibility
●●●●●●●●●○

Value for money
●●●●●●●●●○

Overall
●●●●●●●●●○

DGCalc

Digita • £39.99

One of the older products, but still sells well. Enough features to be sure, but not so many you accidentally think you're running a really top notch, state-of-the-art system, or anything like that.

This program looks as though it was written in compiled Basic, which I suspect it was. This doesn't mean it's rubbish, as it's a perfectly good spreadsheet, although a little limited and lacking anything that might be described as a unique feature.

But it does the basic job of crunching numbers very well with, few screw-ups.

The program opens a window on your Workbench, and cell selection is via the cursor keys or the mouse. There are no Amiga menus, and menu selections are made, PC-style, using a sort of duck shoot along the top of the DGCalc window.

The program is referred to as DGCalc in the docs and the packaging, but DigiCalc in the program and files. I suspect that there is another program called DigiCalc and that the name was subtly altered to avoid any ruckus.

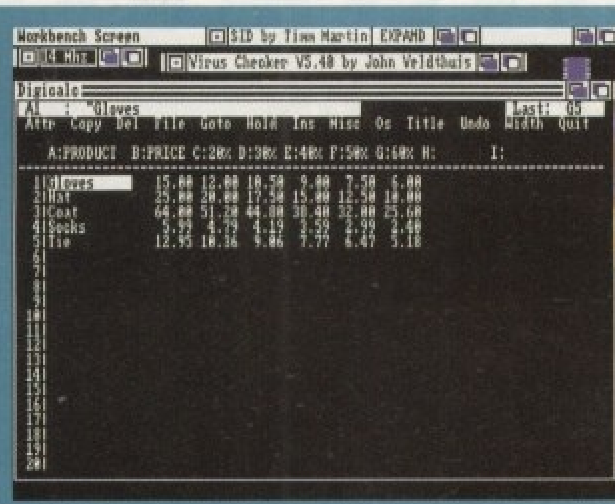
Ease of use
●●●●●●○○○○

Graphics
○○○○○○○○○○

Compatibility
●●●●●○○○○○

Value for money
●●●●●○○○○○

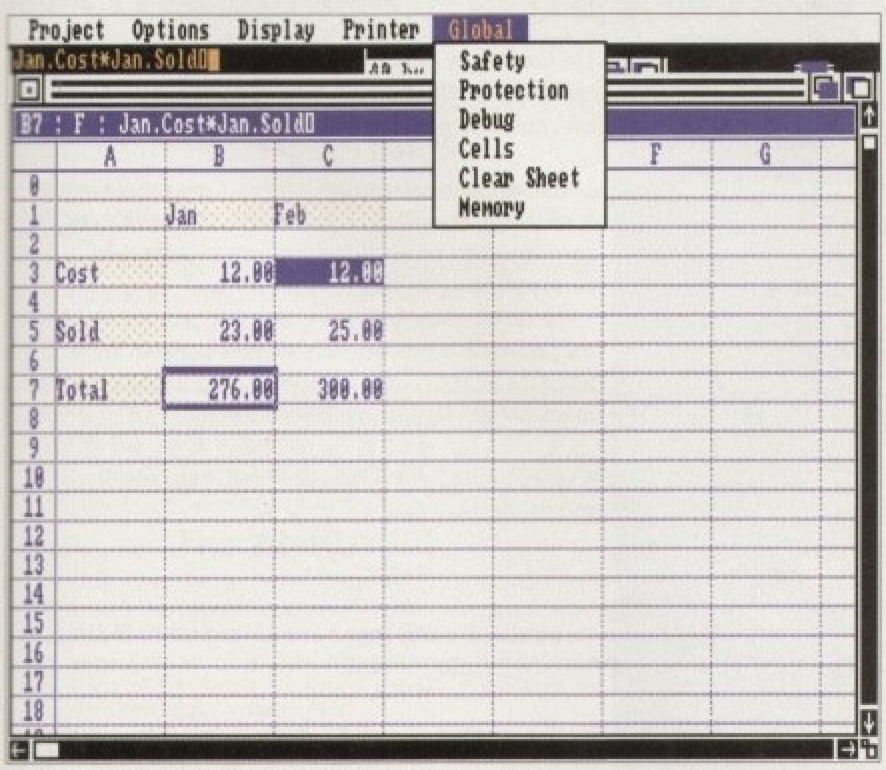
Overall
●●●●●○○○○○



The manual is slim but informative, and one of the few items reviewed here which had a full glossary of terms for novice spread users. A comprehensive tutorial section takes you through the first spreadsheet.

It's limited by the number of calculations it can do at once, but then it is an old product, and a cheap way into spreadsheeting.

I'm told by Digita that, in line with its spanking new product range like the best selling Wordworth 1.1 and Home Accounts 2, there will be a new product which will supersede DGCalc in the very near future. Watch that space, as this new thing is bound to be good.



KSpread 2: The younger brother of Kuma's latest, KSpread 4

KSpread 2

Kuma • £63.45

An older version of the former, and so a sort of younger brother of KSpread 4. KS1 was too elementary, KS3 was just a stepping stone to KS4. But KS2 still sells well as a low-end solution to the problem of crunching any numbers you want crunched.

You can tell it's a less-than-young product when you check out the manual. It's typewritten, as opposed to the laser-printed KS4 manual. Kuma have published a few books since KS2, and this shows in their presentation.

As a program, I'd say it forms a bridge between elderly products like DGCalc and more muscular modern products like KSpread 4 and ProCalc. It has some of the functionality and power of KS4, but with the simplicity of interface and cheapness of good old DG. KS2 is definitely better than DG though, and I'd always back KS2 from a standing start.

The program only imports and exports in its own format and DIF, which is a bit restricting, but at this end of the market you can't really complain about such things too loudly, or you'll be accused of being a cheapskate.

Features cost money, and if you want the full monty you'll have to shell out for something like ProCalc or KS4!

KSpread 2 might be down the pile a bit perfection-wise, but this doesn't mean it lacks redeeming features of its own. I particularly liked the way you can cut and paste whole 2D sections of the spreadsheet simply by highlighting a box shape with the mouse and repositioning the section elsewhere.

All the formulae re-jig themselves to match the new arrangement, and it's all automatic. There are two versions on the disk, one with graphics and one without – obviously if graphics aren't needed, you can opt to squander the memory on something frivolous, like a few bits of data.

Ease of use
●●●●●●●○○○

Graphics
●●●●○○○○○○

Compatibility
●●●●●●●○○○

Value for money
●●●●●●○○○○

Overall
●●●●●●●○○○

ProCalc

Gold Disk • £129.96

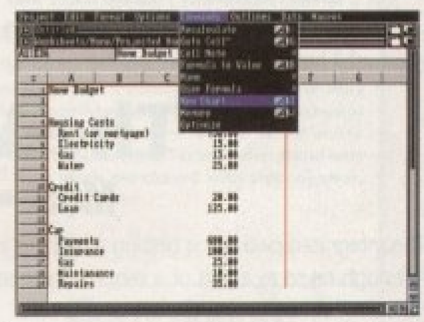
One of the glitzier spreads, with the kind of features and good looks you'd expect on a Gold Disk product. Features a unique ability to render your spreadsheet in various fonts and sizes for emphasis of a certain point.

PostScript output is available if you have a compatible printer, and being a Gold Disk product you have the ability to save your graphs to disk as ProDraw 2.0 clip art.

This means that you can produce a presentation as IFFs for the screen, and produce similar graphics for a document to accompany your demonstration.

The manual is a very nice piece of DTP, as you would expect from the makers of one of the best DTP programs on the Amiga, and ranks up there with the EA and Digita manuals for slick presentation and good layout.

The words look nice, but they also mean



something too, which is all to the good.

Another nice touch is the control panel arrangement across the top of each sheet, giving you access to different fonts and sizes, and the ability to alter and arrange your spreadsheet as if it were a wordprocessing document, which to a certain extent in ProCalc it is.

The range of graphs you can create is the most extensive of all the programs I tried, and it's this that makes it my personal favourite. Not only can you create graphs for your data, but you can try a number of different types, too.

It's not unlike having Peter Snow sitting by your side with the Newsnight computer whizzing up swings to the left and right as your data changes. Professional is the word, and apart from KSpread 4 there's not much to touch it for professionalism and graphics.

Ease of use
●●●●●●●●●○

Graphics
●●●●●●●●●○

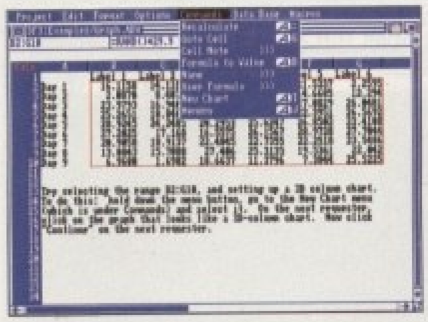
Compatibility
●●●●●●○○○○

Value for money
●●●●●●●○○○

Overall
●●●●●●●●○○

Advantage

Gold Disk • £86.91



The previous opus from Gold Disk on which ProCalc is based, and seeing this, it's easy to see why they produced ProCalc. It offers similar kinds of options to its new brother, but is obviously less flash and less WB2.0 looking.

Although now superseded by ProCalc, it's still available and for less money too, so it might be a good idea if you lack the necessary funds to run to ProCalc, but you want some of the features.

It reads and writes 1-2-3, and like all the other American products, has an ARexx port, although quite why I'm not really sure.

OK, so you can whizz data from one program to another, but the programs have to be compatible or it all goes horribly wrong. Gold Disk products have no trouble with this, but as for others – you'll have to suck it and see what happens.

Just a smaller version of ProCalc then, and in the charts I'd say it ranks in front of KSpread 2 but behind it's big brother.

Ease of use
●●●●●●○○○○

Graphics
●●●●●○○○○○

Compatibility
●●●●●●●●●○

Value for money
●●●●●●●●●○

Overall
●●●●●●●●●○

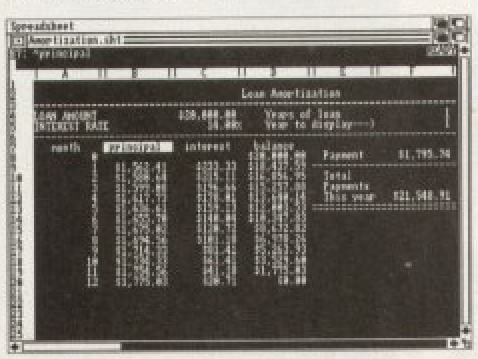
The Works

MSS • £78.91

This integrated package is getting a bit long in the tooth now, but still has something to offer. Although taken as a part of a very comprehensive integrated suite of programs, no single program is that bad.

Taken in isolation, the spreadsheet module is pretty ordinary, on a par with the integrated spread you get with an Atari Portfolio. Although it does all the usual stuff you'd expect, having read up on the others in the marketplace, it lacks a certain lustre or spark of originality.

It's black-and-white for a start, and although it features a choice of graphics, it can't match the performance of something like KSpread 2. Divide the cost of the program up into the price per component, and you get £16 each program, which is about what Word Spreadsheet is worth. Why buy five indifferent programs when you can buy one really good one?



Ease of use
●●●●●●●●○○

Graphics
●●●●●●○○○○

Compatibility
●●●●●○○○○○

Value for money
●●●●●●○○○○

Overall
●●●●●●○○○○

Conclusion

By far the best program, even in the eyes of some of the people who sell the others, is KSpread 4 by Kuma Computers. It has the biggest range of features, and is compatible with more programs than any of the others.

Anyone who expects to make much of an impression on the Amiga spreadsheet market had better be sure that their idea has all these features and more, or they stand no chance.

Although KSpread 4 was undoubtedly the winner from the sheer weight of features, my own personal choice would be Professional Calc, for its 1-2-3 read/write ability and the option of being able to export graphs to ProPage in ProDraw clip format.

So if you want the best, choose Kuma's KS4. But if you just want a little pocketable piece of personal protection, ProCalc is your man.

Many thanks to Precision, HB Marketing, Kuma and Digita for supplying the products reviewed in this article.

Jargon buster

Absolute
A formula placed somewhere else in the spreadsheet stays the same. If the same formula was copied **relatively**, the cell references within the formula would change to fit the new cell.

Ascii
American Standard Code for Information Interchange. Special codes for text characters which do not differ between computers.

Cell
The intersection of a column and row in a spreadsheet, normally referred to by a letter and number depicting the row and column in question, ie A1, F4 or Z26. This numbering system is called the cell reference.

Column
Vertical arrangement of cells in a spreadsheet program.

Command-driven
Commands are entered from the keyboard rather than selected from a menu.

Formulae
These are mathematical expressions on which the program bases its calculations. The variables in these calculations, like computer program variables, are the cell references in the spreadsheet.

For example: B4 * C5. This takes the number in cell B4 and multiplies it by the number in C5. The result is printed in the cell containing the formula. So you could say a formula in a cell was a way of calculating what is to appear in that cell.

Justification
The data in any cell in a spreadsheet can be justified like text in a wordprocessor, so the figure can appear on the left-, centre or right-hand side of a cell.

Password protection
Sometimes your spreadsheet information is private or even confidential, like salaries or tax. In these circumstances you need to restrict access to the program to authorised personnel only.

You do this by only allowing access to persons who know the password. It's unlikely this will be a problem in the home, but if your computer is in an office all the time, you may want this feature to protect your data.

Range
A way of setting all the values between two cells. Some spreads do it like this:

```
A1..A5
```

meaning all the cells from A1 to A5, and others like this:

```
A1:A5
```

either way, it means the same. This is just a shorthand way of applying a formula to a range of cells at once.

Row
The horizontal cells in a spreadsheet.

Scroll
Some spreads have a scrolling ability, so when you push the cursor to the edge of the screen, more of the sheet is revealed.

Text overflow
A feature common to a lot of sheets, where the text label may overlap the cell it's in regardless, but in some you don't have this – or even variable cell widths at all – so you have to place half the word in each cell.

Undo
Some spreads even have an Undo function, which is good for people who spend their whole computing life saying "No, that's not what I meant, stop!" to their computers.

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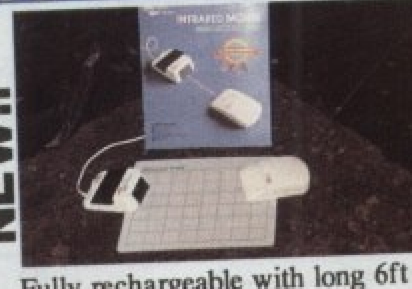


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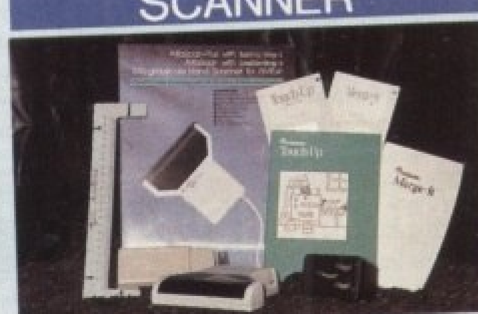
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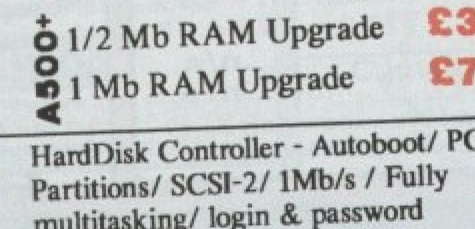
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AMIGA Update

The latest in DTP, ray tracing, and a new version of Workbench in the most up-to-date Amiga column in the business

ProPage 3.0

Hot on the heels of the much improved PageStream 2.2 comes Gold Disk's latest salvo in the DTP war, ProPage 3.0, which concentrates, unlike version 2.1, on new features rather than bug fixes. A quick glance at these features is enough to tell you that Gold Disk have gone straight for the power user's jugular.

The most significant improvement has to be the comprehensive ARexx support which, given its 330-odd commands, offers complete control of ProPage from ARexx.

Better still, in order to get the most from ARexx, the program uses what it calls "genies" – really just ARexx scripts – which are directly accessible from ProPage at the click of a button.

When you boot ProPage 3.0, you'll find that the mop tool has been replaced by an Aladdin's lamp button, which brings up the genie requester (corny!) when clicked on.

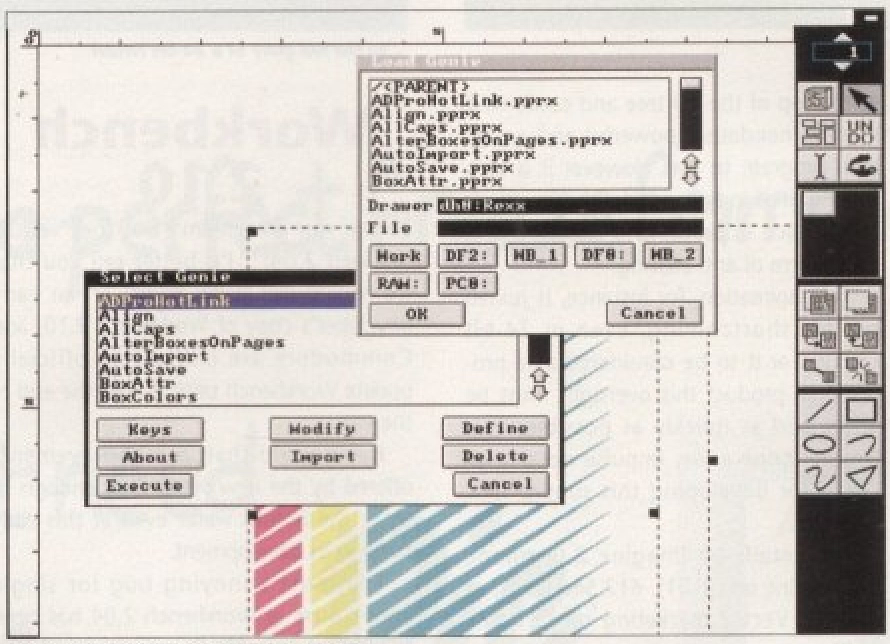
Tweaking

There are over 50 function genies already defined, ranging from the simple AllCaps and similar text effects, to box attribute control and even an ADPro "hotlink" which enables bitmap tweaking in ADPro and automatic re-importation of the graphic once it has been tweaked.

As ARexx is being used by more and more programs, the genie feature makes ProPage 3.0 a much more powerful tool, and gives the ARexx-conversant user the opportunity to write macros for virtually every situation.

My one complaint about genies is that there is no auto-record function. When you click on the Define button, ProPage simply loads up the Article Editor and expects you to write your own macro.

This is all very well for those who use ARexx or who have the patience to learn to use it, but those unwilling to go near even so simple a language as this will more than likely never realise the full potential of ARexx control. An auto-record function capable of generating ARexx scripts would have made ProPage 3.0 a "must buy" product.



ProPage 3.0 offers over 50 function genies

Other enhancements include a font conversion utility which will convert Adobe Type 1 PostScript fonts to the Compugraphic fonts Gold Disk seem determined to stick with. FontManager works well, and the converted fonts are of perfectly good quality, but it can be a bit slow if you're copying a complete set of PostScript fonts across to your Compugraphic drawer.

Nevertheless, its inclusion gives ProPage access to the hundreds of Adobe Type 1 fonts available and, as typefaces are the bread and butter of DTP, this has come not a moment too soon. Nine Compugraphic fonts, including Caslon and Uncial, are now supplied with the package, so most users will have enough to get started with.

Another feature which will be music to the ears of existing ProPage users is the irregular text flow option. Using this, text can be made to flow round the outline of any structured drawing rather than its box, as was previously the case. Unfortunately, although Gold Disk have at last seen the light on this one, they have failed to implement it properly.

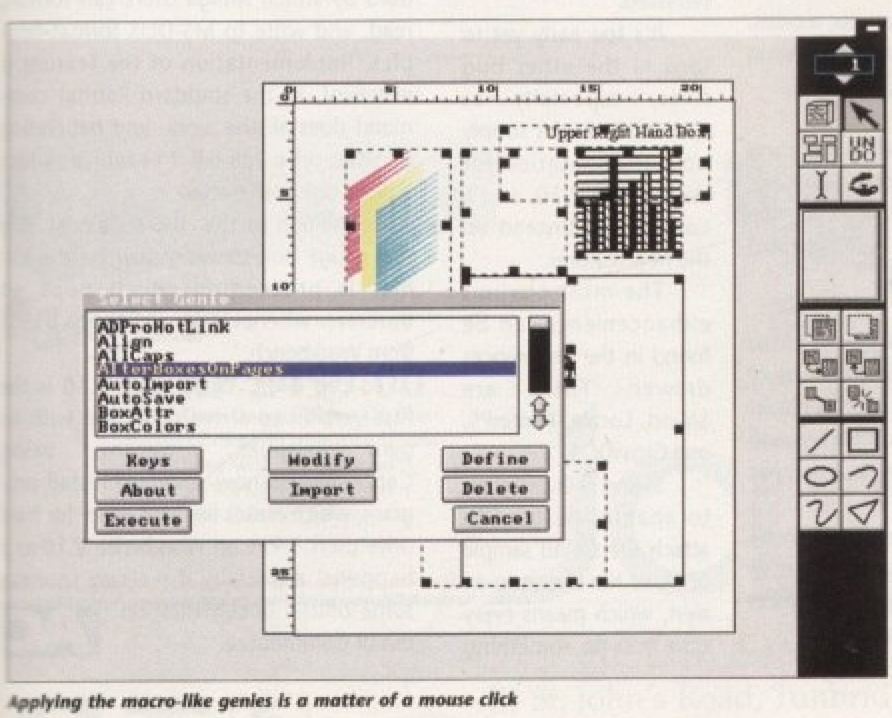
Text can flow around the left or right of an object, but not both, so it is still impossible to have a circular hole in your text unless it is at the juncture of two columns and you create an ellipse either side of the gutter. I have to admit to shrieking with annoyance when I discovered this relatively simple omission. The direct Hotlink to ProDraw 3.0 (due for release later this year) is easily the most attractive to users with a lot of clip art or other structured drawing in their pages. The user need only click on the box containing the ProDraw clip, select the ProDraw option, and ProDraw is loaded with the clip ready to be edited

In combination with ProDraw 3.0's new Fountain Fill option, which will allow full-page gradients, the hotlink adds a great deal of functionality to ProPage, saving a lot of time and hassle if you use ProDraw clips.

Text filters

With the new auto-tiling print option, a long-needed Undo feature, text filters for most American (not British) wordprocessors, and a few tweaks to the colour separation process, ProPage 3.0 will be far and away the most welcome disk to have dropped through the letter boxes of registered users. There are still areas in need of improvement, but Gold Disk have done a fine job in boosting the package the way they have.

Want to know if it's better than the rest? Then buy the next issue of *Amiga Computing* and read our three-way battle of the DTP giants. ProPage 3.0, PageStream 2.2 and Saxon Publisher 1.2 will all be fighting it out for the DTP Lonsdale belt, so for all you fight – and font – fans out there, it should be unmissable.



Applying the macro-like genies is a matter of a mouse click

Imagine 2.0

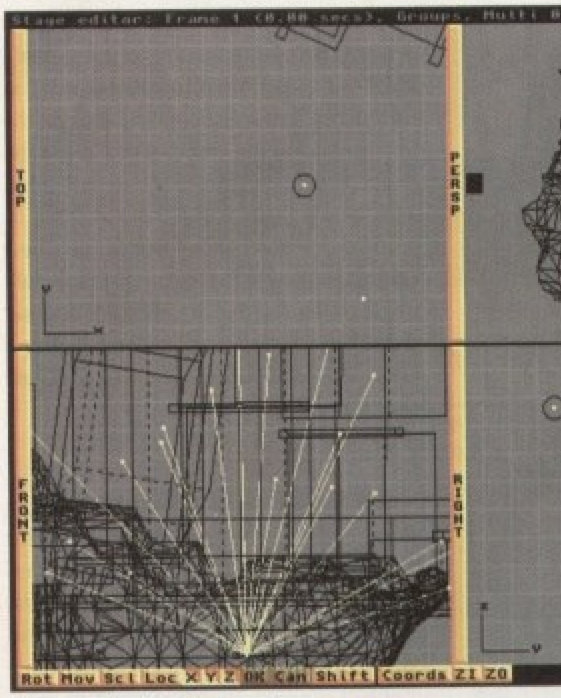
Impulse Inc of Minnesota, USA have just released a major upgrade to their flagship 3D rendering and animation program, Imagine. This comprises of revisions and improvements to all sections of the package as well as a new version 2.0 look to the interface. Together these constitute a significant improvement in the power and functionality of this already impressive software.

One of the most striking aspects of the new version of Imagine is the configurability of the interface as a whole. This has been achieved through the introduction of a Preferences page which is accessible from any of the other modules.

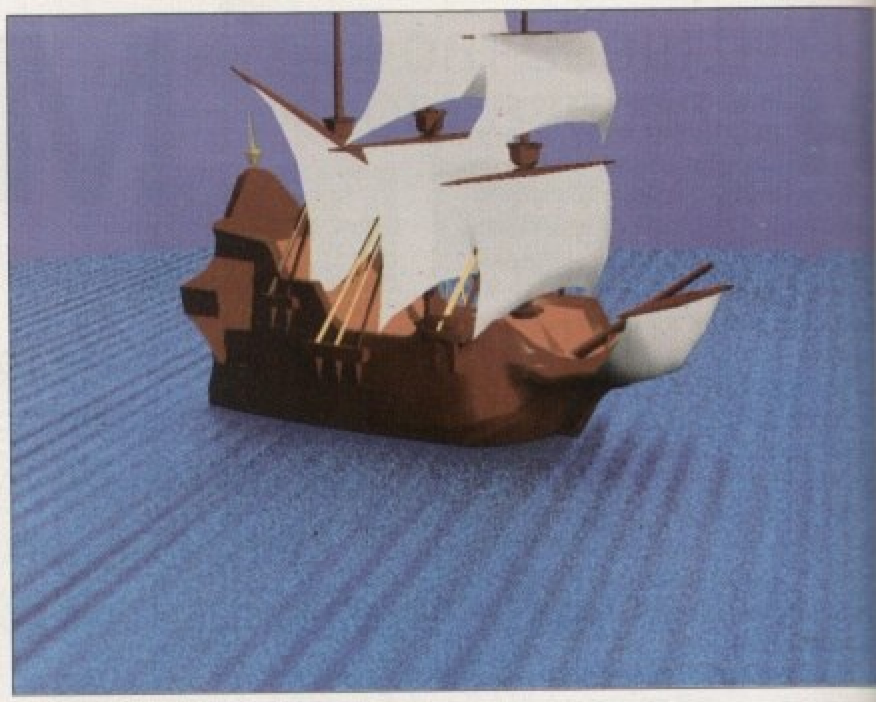
Previously the user had to access Imagine's all-important config file through the CLI but now you can set up all preferences from within the program. In addition to this, each editor can have its menu options assigned to any one of the function keys of the Amiga keyboard or create special Unix-style "buttons" along the bottom of the workscreens to perform these tasks.

This means that you can set up the program in such a way that you need hardly ever touch the keyboard or access the menu bar. A double blessing, as not only does it speed up user interaction, but it avoids the eye straining and totally superfluous drop shadow fonts found in the menus.

Overall, the program has been given a ➤



From complex detail construction...



...to the full glory of a 24-bit render

silkier feel and users will find themselves flying around the various modules in creating their animations and renders. The manual, though greatly improved, still has its shortcomings, but at least is an improvement on Impulse's previously lamentable efforts.

The 300-page volume contains reference and tutorial material on all aspects and applications, presented in a reasonably clear if badly structured manner. Not content with ably instructing the user about the program, it also offers a more than generous helping of Impulse Inc's unique in-house philosophy.

As far as functionality and potential goes, this upgrade places Imagine firmly at the top of the 3D tree and confirms it as a tremendously powerful and enjoyable program to use. However it is seriously flawed in its rendering by Impulse's persistence in employing an extremely crude form of anti-aliasing.

Text animation, for instance, is ruined by this shortcoming, even in 24-bit colour. For it to be considered as a professional product this oversight must be addressed as quickly as possible. This (major) gripe aside, Impulse deserve all credit for developing this superb new version.

For details on Imagine 2.0, phone Impulse Inc on (0101), 612 566 0221, or Applied Vector marketing on 081-977 1105.

Imagine's new features

● **The Forms Editor** – This has seen substantial rewriting and what was a rather baffling inclusion in Imagine 1.0 has become a powerful method of creating complex organic shapes. It does this through a process involving "key slices" and while it demands a great deal of application in the learning stages it offers a degree of modelling control found nowhere else on the Amiga.

● **The Cycle Editor** – This module, where animation sequences such as walking can be prepared, now offers the great potential of morphing between shapes.

Unfortunately, however, these new features do not work as they are described in the manual. This is a great pity as they would be an extremely powerful facility to have.

● **The Detail Editor** – The main modelling page now offers true bump mapping, reflective diffusion to prevent pixelisation when using reflectance maps on flat surfaces, soft and hard edge control to avoid the "bulging" associated with phong shading on acute angles, fog objects which fade out at their edges and a host of new procedural textures such as water effects and even leopard spots! Spline paths can now be edited within this editor and used by the Mold (sic) function to extrude and replicate outlines. Another handy feature is the ability to perform a "quickrender".

This is a full-colour preview within the editor using a fixed light source for speed and it obviates the need to set up an entire project in order to view your models. This function is found in all editors allowing previewing at all stages before commitment to a final render.

● **The Stage Editor** – This is where models, lights and paths are combined to make up animation sequences. Apart from making the snapshot function work, the main change to this section is that it is now separated from the Action Editor.

● **The Action Editor** – This scripting page now allows rendering over background pictures, and the use of two of Imagine's unique special effects, such as ripples and explosions, at once. With Control of background fog you can eliminate distracting detail from scenes and simulate depth of field effects.

Background frames and reflectance maps can be indexed to allow digital layering of animations within your computer to create infinitely complex sequences without any degeneration between passes.

Workbench 2.10

Before you all scream "but they've just released 2.04!", I'd better tell you that we've laid our sticky hands on an early developer's copy of Workbench 2.10, and Commodore are unlikely to officially update Workbench until at least the end of the year.

Having said that, the improvements offered by the new system are enough to make the mouth water even at this early stage in its development.

The most annoying bug for single floppy users of Workbench 2.04 has been the Format command's insistence on being very stupid. When a floppy is formatted, even if fresh and write enabled, the Amiga insists on complaining that it is write protected. You can get round this by clicking on Retry, but in 2.10 the bug has been removed.

It's too early yet to look at the other bug fixes, especially as Commodore can supply no documentation for Workbench 2.10, so I'll concentrate instead on the new features.

The most obvious enhancements can be found in the preferences drawer. These are Sound, Locale, PrinterPS, and CrossDOS.

Sound is a program to enable the user to attach the sound sample of his or her choice to an alert, which means every time you do something stupid you can have you Amiga belch, beep, or fart at you. This at first is great fun, but after a while you get the feeling a simple beep will do.

Locale gives the user a choice of world time zones in which to work, and languages to use, but its function is otherwise a little unclear. How it will be implemented we will tell you as soon as Commodore admit that Workbench 2.10 exists.

PrinterPS enables full Workbench control of PostScript output specs, including font selection of the Adobe 35 PostScript font set supplied with most compatible laser printers. There's a full text options panel where users can set the text size, leading, line spacing, and margins.

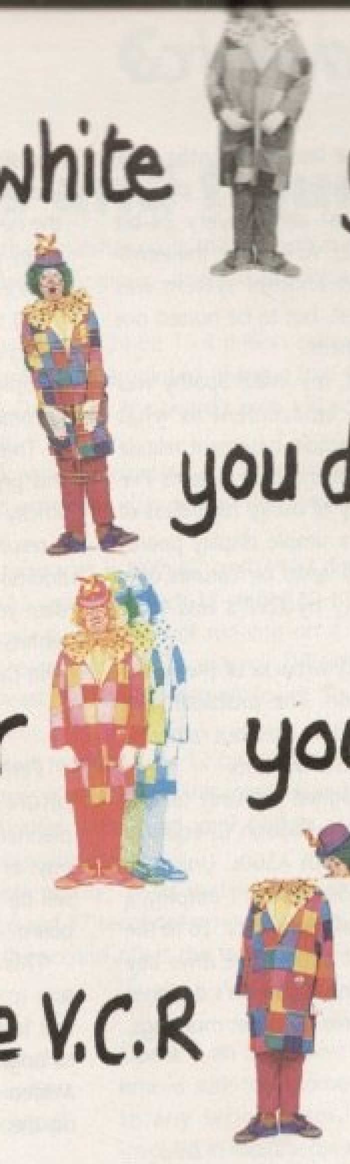
Paper size, orientation, and most other settings are also catered for, with the notable exception of scaling. Let's hope this last feature can be included before the final version is released.

CrossDOS

CrossDOS, at long last, provides a standard by which Amiga users can format, read, and write to MS-DOS format floppies. Implementation of the feature is excellent, as the standard Format command does all the work, and depending on what drive you tell it to format, which type of disk you're after.

In addition to this, there's a neat little fuel gauge box showing how far the format is proceeding which pops up onscreen whenever you initialise a disk from Workbench.

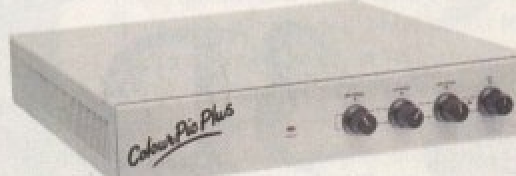
To cap it off, Workbench 2.10 is the first version to arrive complete with its own installer program, using Commodore's now standard Install program, which makes life a lot easier for hard drive users. More on Workbench 2.10 as it happens, especially if we can squeeze some official documentation out of Commodore. AC











Price, performance, AVideo...

AC's 24-bit techno junkie Paul Austin offers a mouth-watering taste of the amazing AVideo

Over the last 12 months, I've had the pleasure of playing with just about every 24-bit board on the market. As a result, the imminent arrival of yet another system was greeted with interest, but to be honest not exactly wild excitement.

As it turned out, my initial apathy was transformed into amazement as what appeared to be a bargain basement release proved to be one of the best systems I've had the opportunity of using, regardless of price. Rather than a simple display board, AVideo offers a vast array of features only matched in variety by GVP's less than impressive IV24.

One of the few drawbacks of the board concerns installation. The problem isn't caused by the procedure itself but rather by its implications for your warranty

The board is designed primarily for the A1500 and upwards, although Checkmate claim compatibility with A500s. Unlike all other systems, AVideo doesn't employ a Zorro slot as an installation point. To fit the board you must first remove the drive bay and pop out the Denise – Amiga's designer display chip. Once free from her moorings, the aforesaid chip is then popped into an identical slot on the board. When secure, the new PCB with its selection of additional chips plus good old Denise are mounted back in the original chip socket.

All that remains is to trail the accompanying cable to a suitable Zorro through slot complete with its RGB connector ready to accommodate the monitor.

There are basically two problems with this process. Firstly, piggy-backing chips is strictly illegal in the eyes of Commodore. As a result, being caught with the offending addition on your motherboard will invalidate your guarantee. If however your warrantee is no more than a distant memory, who cares what Commodore think!

Direct soldering

Perhaps a more serious threat to the future of the board is Commodore's planned move to surface-mounted technology. In other words, all major components will be soldered directly on to the motherboard.

This annoying change of direction is sure to put all piggy-back style products in real trouble. Therefore, if you're planning to upgrade to a A1500 or above with an AVideo on board, you'd be well advised to do the decent thing, sooner, rather than later, otherwise you could miss your chance altogether.

With these two points out of the way, it's time to get down to some serious flattery. Once the hardware is safely installed, the next task is to add the impressive collection of software.



Aside from the commercial software, the system offers a powerful array of control utilities which add a lot of weight to the board's potential as a multimedia workstation.

Perhaps the most obvious, and instantly appealing, option allows you to load either 12- or 24-bit images and display them through colour zero on the Workbench screen. By applying the aforementioned colour to the majority of the Workbench environment, the board achieves a pseudo-genlocking effect with either 12- or 24-bit images appearing as the ultimate Workbench backdrop.

As well as offering designer backdrops, it's also possible to produce Picture in Picture or PIP effects with the graphic of your choice floating in a window all its own. As with the majority of AVideo's display formats, this is controlled via the Opera animation software – which I'll cover in detail a little later in the article.

Imagery

To produce any effect obviously requires imagery, but thanks to yet another control utility the board isn't merely restricted to 12- or 24-bit creations.

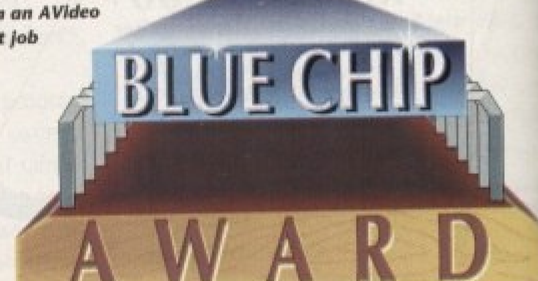
Any standard Amiga graphic can be converted via the AVRemap utility for display on the board, so there's no reason why standard Amiga art can't appear alongside 12- or 24-bit images as part of either an animation or a slide show. As



For £599, who can argue with this quality?



Imagine 2.0's cow given an AVideo paint job



well as the amazing TVPaint bundle (see box), an equally important piece of software must be the ARexx-based interpreter, Opera.

Opera allows the user to compile impressive animations and slide shows by employing the power of ARexx via a CanDo-style script-building interface.

The software automates the development of ARexx scripts to the point where even relatively inexperienced ARexx users can produce stunning effects and anims. By using the board's own icon-driven installation software, AVideo can be made resident via the Workbench or CLI and then address directly via ARexx.

Once active, the Opera utility opens a user interface which allows simple click selection of files and effects, which then instantly translate into an ARexx script and appear in an adjacent script window. Either complete scripts or individual lines can then be run and tested as required.

If faults occur, the errors are trapped in an additional output console with a standard ARexx error message detailing the offending line ready for correction.



Eye, eye, this looks interesting... TVPaint in action

No doubt you're thinking Opera sounds a bit too good to be true, and to be honest – for the average ARexx novice – it is. Although the interface and console are indeed friendly and do take a lot of the drudgery out of script compilation, the ARexx scripts created are exactly that – pure ARexx.

For the novice, tracking down and debugging even an automatically-generated ARexx script can be a painful and confusing process. As a result, it's not a good idea to expect a miraculous performance without a reasonable knowledge of the language.

For example, when errors occur within a script, bog standard ARexx error messages are reported via the console, so unless you have some understanding of the scripts themselves, debugging can be a tricky business.



Transform your household pets into...er...24-bit household pets

Having had a slight whinge, it's perhaps worth recapping what Opera can offer when mastered. Aside from simple sequential slide shows, images can be introduced with an impressive range of supplied effects.

Additional text can be included in the font of your choice, while images appear in windows on the Workbench, or as overlays on existing graphics. Animations can be compiled from full screen images, while individual objects or brushes can be animated and overlaid to add even more excitement to the presentation. In short, Opera is an impressive addition which in time is sure to become an invaluable tool to any serious user, especially those involved in multimedia and animation.

As a general purpose 24-bit multimedia/graphics card, AVideo literally blows the opposition out of the water with a combination of state-of-the-art software and flexible applications.

The only aspect I'd like to see improved is the documentation for the board itself, with perhaps a detailed tutorial on how to get the best from Opera.

Unrivalled

In terms of 24-bit RGB output, it's unrivalled for both price and performance in comparison to both the IV24 and G2's Imagica. This is a position which will soon be enhanced even further by the addition of a 24-bit frame grabber which Checkmate are planning to supply as an add-on to the system.

In terms of animation, AVideo's only rival is DCTV which because of its built-in frame grabber and microscopic file format is arguable still the ideal 24-bit option for animation aimed directly at VHS video.

Having said that, DCTV's composite output doesn't match up to AVideo's 12-bit anim display for higher quality animation and slide shows. In short, if you're about to invest in a general purpose 24-bit system, it's almost impossible to consider any other board as a better buy than this truly excellent product. AC

The facts and figures

In terms of resolution, AVideo more than matches up to the opposition with a full broadcast 768 x 580 display – ideal for video applications – or standard Amiga output of 640 x 512 (hi-res interlace).

Image quality is also impressive, with a full 24-bit 16.8 million colour display. During editing and animation, two 12-bit buffers are employed giving a true 4,096 colour display which can then be toggled via TVPaint or the board's own software to display full 24-bit as a separate still frame display.

An additional genlock adaptor allows full genlocking of 12-bit images over live video, or alternatively Amiga graphics and animation can overlay the output of the board in both 12- and 24-bit modes.

Picture in Picture is available for still images in both 12- and 24-bit display modes, with a maximum refresh rate of 3/50ths of a second for each 12-bit buffer.

According to Checkmate, the system is capable of running on a standard Amiga, although to be honest I wouldn't recommend it. To employ TVPaint properly, you'll require a 68030, and you'll need at least 8Mb of fast memory to use the program's 24-bit Undo option when using full overscan.

The board also offers full broadcast resolution for 12-bit double buffered animation with a maximum speed of 12.5 frames a second in hi-res interlace and 25 frames a second in non-interlace. Both these figures depend on your system and the amount of movement during subsequent frames in the anim.

When utilising the highest possible quality, 12-bit update times are reduced to nine frames per second for hi-res interlace and 17 seconds for non-interlace. The first format is designed for TV and video, while the second offers the maximum clarity for multiscan and VGA monitors.

The spectacularly tasty TVPaint

The most notable commercial addition has to be the premier 24-bit paint package, TVPaint v1.6. This alone is enough to make the board a spectacular bargain – in its Harlequin form the software alone retails at £940!

In the case of AVideo, TVPaint comes as part and parcel of the system and still somehow manages to sell for just £599 inclusive of both the board and all additional software.

In relation to the Harlequin you effectively get the board for nothing and still save £200 plus on the price of the software alone. Of course this calculation doesn't include the cost of the Harlequin card itself which will set you back a further £1,100 in its basic form.

Like the board, AVideo's version of TVPaint is an impressive product with all the latest additions that v1.6 has to offer. The only elements missing in relation to the Harlequin software is the Big Edit option, which allows you to move around and edit images above the board's maximum screen size, and secondly TVPaint's Alpha channel support – this particular feature requires 32-bit architecture.

Aside from these two options, the software is identical. The only operating difference is the restriction of two 12-bit buffers as opposed to true 24-bit double buffering on the Harlequin card.

Because of the 12-bit Edit option, the actual paint display is in 4,096 colours. This should not be confused with Ham's 4,096 colours, as the AVideo display is true 12-bit and as a result does not suffer any fringing or other problems associated with Ham.

On general imagery it's quite tricky to tell a 12-bit display apart from 24-bit. The difference only really appears when graduated painting is applied either via the spray can or during graduated effects. All such additions produced noticeably stepping or colour bands as the saturation fades.

To the 24-bit purist this probably sounds like a unacceptable sacrifice, but all is not lost. The board displays TVPaint's edit screens in 12-bit but actually paints in full 24-bit. Slightly confusing, I agree.

Because the image is in fact true 24-bit disguised as 12-bit, it's possible to view it in all its 24-bit glory by simply accessing the sys menu and switching the board into its 24-bit single frame display mode.

The only noticeable difference between the Harlequin and TVPaint during editing is the slightly slower screen update and a particularly infuriating tendency for the pointer on the AVideo version to float a quarter of an inch above the point of application during painting in video mode (768 x 580) – a minor bug, but an annoying one which I'm assured will be put right in the next update.

AVideo is available from
Checkmate Digital
Tel 071-923 0658
Fax 071-254 1655
AVideo 12-bit version £299
AVideo 24-bit version £599

ABSOLUTE beginners PART 4

Stevie Kennedy starts to fill the tutorial disk and looks at setting up Shell

Last month's column took us to the point where we should have a home-made disk, called MyDisk, with the barest of AmigaDOS files on it to allow auto-booting.

If you didn't follow last month's column, you'll have to buy a copy of the magazine through our back issues offer towards the rear of the mag. Just follow the instructions in the column and you'll be bang up to date with the rest of us.

Before you can properly use the Workbench that your startup-sequence loads, you'll have to be able to click on icons and to open a Shell. For this, MyDisk will require a "library" file and the correct commands and so on to make a Shell work. First of all, we'll add the library.

Icon.library is the AmigaDOS file containing the routines needed by Kickstart to display icons onscreen and has a sister in the shape of Info.library, which enables the user to mess about with icon tool types.

We'll worry about tool types in later columns, so as you're probably eager just to get those icons to appear, copy icon.library from your Workbench disk to MyDisk using the command:

```
COPY LIBS:ICON.LIBRARY TO MYDISK:LIBS
```

Now we're ready to delve into some of the more esoteric areas of AmigaDOS. We have a very empty disk and over the next few months we'll progressively fill it with files, dealing in each column with a new practical application.

For the rest of this instalment, we'll concentrate on Shell so that when we use the disk we can access its gradually increasing power.

Shell has changed a great deal in the transition from Workbench 1.3 to 2.04, both in its user interface and in the files needed to make it function. On a Workbench 1.3 disk, there are several more steps you'll need to take to get Shell up and running, so we'll start with a 2.04 Shell and then detail the further steps needed by 1.3 owners.

For those using Kickstart and Workbench 2.04, setting up a Shell has been made very easy. All the Workbench 1.3 device-handlers and so on have been made resident in the Kickstart ROM which means you need only copy a Shell icon and Shell-startup file to MyDisk to equip it with a window into AmigaDOS.

To do this, boot with your Workbench disk and locate your Shell icon – it may be in the main window or could be stored in the system drawer. Now click on it to open Shell and change directory to wherever the Shell icon is situated.

If it is the main disk window (the root directory), you should already be in the correct place. If it is in the system drawer, type:

```
CD SYS:SYSTEM
```

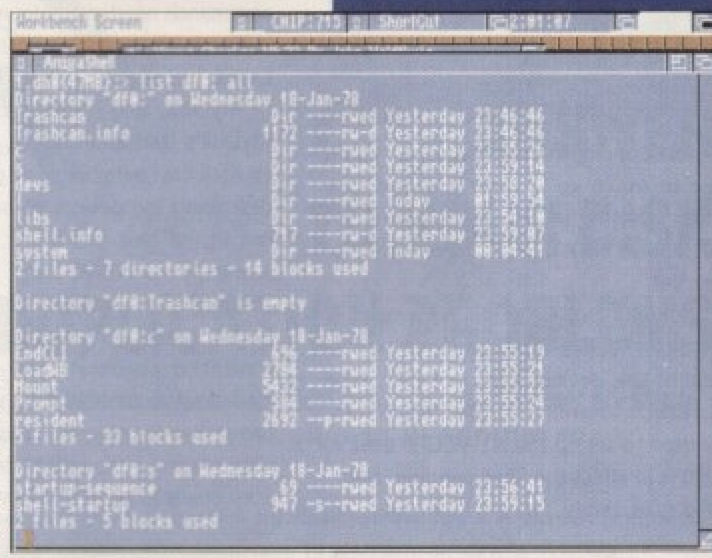
to change directory. Now all users should type:

```
COPY SHELL.INFO TO MYDISK:
```

and the shell icon, designated, as all icons are, by the ".info" bit tagged on the end, will be copied to your designer disk.

You will now have a basic operable Shell, but to add a final touch, the Shell-startup file should be copied across as well. This is a script file – we discussed these last month, remember? – executed one command at a time when you open Shell, in much the same way as a startup-sequence is executed when your disk boots up.

The standard Shell-startup contains a few Alias commands (explained later) and the Prompt command. The file will be the same whether you are using Workbench 1.3 or 2.04, and simply sets up the conditions the user chooses for his or her Shell when it is opened.



A List All of MyDisk shows a busy internal setup which is beginning to fill out

For example, if you wanted your current directory to be SYS:WORK when you loaded Shell, the command CD SYS:WORK could be inserted somewhere in the Shell-startup to carry out the directory change automatically when you click on your Shell icon. Smart, eh? For now, we'll refrain from tampering with the file and just look at what it does.

If you type ED S:SHELL-STARTUP while in Shell, you should have a copy of the file visible onscreen, and have noticed an entirely new command, namely Alias. This is an extremely useful command which only works in conjunction with Shell and which can make life a great deal easier. It is used to give an "alias" or shortened version to any single command string you care to define.

To set up an alias, you would use the following sort of line:

```
ALIAS [your choice of alias] "AmigaDOS command string"
```

This means that if you get bored typing the full command for a simple diskcopy, you could insert a line in your Shell-startup to substitute a much easier to type alternative such as:

```
ALIAS D01 "DISKCOPY FROM DF0: TO DF1:"
```

In future all you'd have to do to carry out the diskcopy would be to type D01 and the clever little Shell would know what you meant.

The other command you'll find in the Shell-startup file is the Prompt command, usually the last one in the file. Prompt is used to tell Shell how much information to display before the cursor, and can be configured to display just the process number or the full-blown pathname of the directory in which you are working.

The latter can be useful when you jump through several directories as you always know your position in the directory "tree", and for this reason is the recommended mode of operation. The Prompt command you will see in your Workbench disk's shell-startup file is best left as it is, as it takes the form:

```
PROMPT "%N.%S> "
```

The %N part just displays the number of the Shell process, and the %S part displays the full pathname of your current ➤

This month's jargon

Mountlist

An Ascii file containing the AmigaDOS definitions of every device to be mounted. Without this file and the correct entries in the DEVS: drawer, you'd get one of those "Entry not found" error messages, and nothing would happen. A mountlist will usually contain entries for NEWCON:, SPEAK:, RAD:, and so on.

Resident

Using the Resident command, AmigaDOS can make a variety of commands and device drivers "resident" in memory, which means they are kept in RAM until a program needs to use them. Only "pure" commands can be made resident, so if the file in question is not "pure" it will be forced into that state by the resident command.

Pure

If an executable file – such as an AmigaDOS command – is "pure", it can effectively be used by more than one Shell process or program at a time, and if a pure file is made resident, it will be accessed quickly and efficiently. This is central to the Amiga's multitasking operating system, and saves a lot of time.

A file's pure status can be set on or off by altering the file's protection flags, one of which is reserved in the role of keeping tabs on this. Not all files can be made pure, but many of the standard AmigaDOS commands, such as Execute and Assign can.

directory. After that there's a space, for purely aesthetic purposes, and a little arrow just in case you need to be told where to start typing which, as we're rapidly becoming Amiga experts, we won't particularly require!

Right, we've looked at the two steps for setting up a Workbench 2.04 Shell, both of which are applicable to Workbench 1.3 owners, so we'll now look at the extra files and setup conditions required by a 1.3 Shell. First the files.

To get it over with as painlessly as possible, here's a list of all the additional files needed by a 1.3 Shell and their location on your Workbench 1.3 disk:

- C:PROMPT
- C:RESIDENT
- C:MOUNT
- DEVS:MOUNTLIST
- L:NEWCON-HANDLER
- L:SHELL-SEG
- SYS:SYSTEM/CLI

Before copying them to MyDisk, you'll have to make an L: directory and one called "system" in the disk's root directory, as our disk doesn't have either of these yet.

The L: directory, you will remember, is where we keep device handlers to complement the devices kept in DEVS:. The file Newcon-Handler is the device handler used to set up the NEWCON: device, which is in effect the Shell window itself.

For now, type:

```
MAKEDIR MYDISK:L
MAKEDIR MYDISK:SYSTEM
```

then, if you're a single drive owner, copy all the files you need into RAM like this:

```
COPY COPY TO RAM:
COPY CD TO RAM:
COPY C:PROMPT TO RAM:
COPY C:RESIDENT TO RAM:
COPY C:MOUNT TO RAM:
COPY L:NEWCON-HANDLER TO RAM:
COPY L:SHELL-SEG TO RAM:
COPY SYS:SYSTEM/CLI TO RAM:
```

The next step is to CD RAM:, eject your Workbench disk, insert MyDisk in the internal drive, then type:

```
COPY PROMPT TO MYDISK:C
COPY RESIDENT TO MYDISK:C
COPY MOUNT TO MYDISK:C
COPY NEWCON-HANDLER TO MYDISK:L
COPY SHELL-SEG TO MYDISK:L
COPY CLI TO MYDISK:SYSTEM
```

Once all that's over, type CD SYS: and replace Workbench in the drive when prompted. We now have the correct files in place for a version 1.3 Shell, and all that's left is to put in place the startup commands needed to mount the device.

To do this, we'll need to create a file called "mountlist" in the DEVS: directory of MyDisk, and insert two new lines in MyDisk's startup-sequence. A mountlist is an Ascii file containing one or more entries describing the devices we wish to mount, but in the case of MyDisk, it needs only one entry (for NEWCON:).

Users of 2.04 machines won't need to create a mountlist yet as NEWCON: is mounted automatically by Kickstart. However, you should carry out the following instructions in any case, as it'll save you creating a mountlist later in the series. Step one is to open Shell and type:

```
ED RAM:MOUNTLIST
```

which will create a blank file in the RAM disk and open the Workbench text editor.

Next, type the following mountlist entry verbatim, to give your mountlist a description of Shell which the Amiga will understand:

```
NEWCON:
        HANDLER = L:NEWCON-HANDLER
        PRIORITY = 5
        STACKSIZE = 1000
#
```

The first line of our mountlist entry tells the Amiga the name of the device, in this case NEWCON:, and the second designates the device handler to be used, which is the Shell-seg file we've just copied to MYDISK:L.

The third and fourth lines don't concern us at this stage, but priority basically sets out how high in the device list a device will appear, and stacksize sets aside a buffer of 1,000 bytes which Shell uses, among other things, to remember the last few commands you've typed in.

Don't forget the hash mark at the end on a line of its own. Without this, the Amiga will not recognise the device entry as the hash mark acts as a sort of full stop. To save the mountlist file, press Esc then X, and it will be written to the RAM disk ready to be transferred to MyDisk. Assuming the commands you earlier copied into the RAM disk are still there, you should be able to do this by typing:

```
CD RAM:
COPY MOUNTLIST TO MYDISK:DEVS
```

then typing:

```
ED MYDISK:S/STARTUP-SEQUENCE
```

– we have still to add the startup commands which will mount Shell ready for use.

So far, the startup-sequence will contain only two lines, LOADWB and ENDCLI. To ensure that Shell is initiated on startup, add the following lines at the top of the file:

```
RESIDENT CLI L:SHELL-SEG SYSTEM PURE ADD
MOUNT NEWCON:
```

The first of these lines is the real biggie. It uses the Resident command to place the Shell-seg device handler in memory under the name "CLI", at the same time making sure it is "Pure", which means more than one Shell window can use it at once.

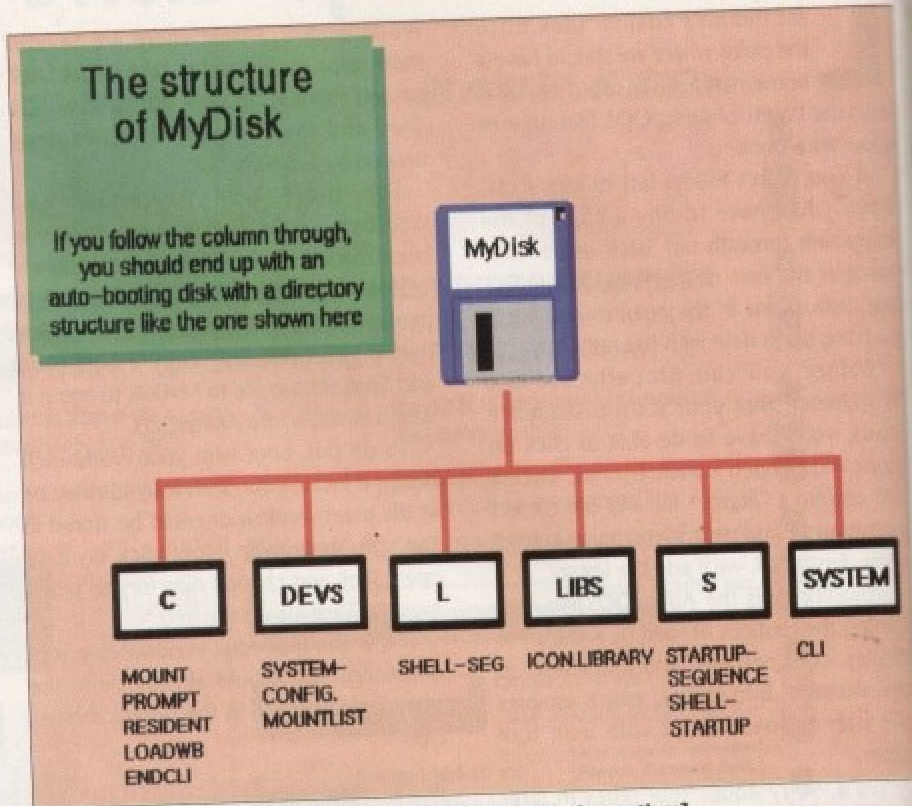
This complicated piece of AmigaDOS chicanery is best taken at face value, as all Workbench 1.3 shells are set up in exactly the same way. The second command mounts the NEWCON: device, which will now function as its device handler has just been made resident.

If you're wondering why Shell is so much more complicated on a Workbench 1.3 machine than on a 2.04 Amiga, it is because version 1.3 was a straightforward upgrade of version 1.2, so that Shell had to be grafted on top of the original CLI device.

In 2.04 machines, Kickstart has been rewritten and expanded to twice its original size, allowing the coders to put all the device handlers and so forth in ROM so that users needn't worry about them.

Well, if you've survived this month without going mad and assaulting the dog, you should be able to cope with what's to come later in the series. Shell, for 1.3 owners at least, is a real pain in the backside, but I've no apologies for introducing it this early in our stroll through AmigaDOS. Without Shell, you can do precious little on a new disk, so it's best to set it up as quickly as possible.

With the worst out of the way, we'll go on next month to look at how to set up printer devices, printer drivers, and the preferences drawer.



Notice how quickly the disk begins to fill after only a couple of operations?

This month's commands

Resident

Used to make a file "resident" in memory, thus speeding up any process using the file, and leaving the way open for the file to made pure for multitasking purposes. See this month's jargon for further details. The command's syntax takes the form:

```
RESIDENT [NAME] {AMIGADOS COMMAND} [REMOVE] [ADD] [SYSTEM]
```

Where [name] is an optional resident name you can give to the file. Using the parameter Add will add the file to the resident list, and using Remove will do the opposite. The System parameter will add the file to a special "system" resident list.

Mount

This command is used to mount any AmigaDOS device which is not automatically mounted by Kickstart or an external ROM, such as with hard drive controller cards. The syntax used is:

```
MOUNT {DEVICE} [FROM ]
```

where {device} corresponds to the name of the device in the mountlist entry. You can use the From argument if you have an alternative mountlist containing entries not fount in DEVS:MOUNTLIST, the file to which mount refers by default.

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Inner space



Paul Austin boots his machine in search of the wide open spaces within VistaPro2

When the original Vista landscape generator hit the Amiga you could hardly hear yourself think for the sound of countless ex-hippies screaming about the ins and outs of chaos theory, interspersed with the occasional lament on favourite fractals past and present.

After the final mushroom had met its maker, the cold light of day soon brought the grim realisation that although generating fractal landscapes is indeed an impressive application, it does have a fairly limited field of application, especially if the end result can only appear as a Ham.

Revised

As a result, Virtual Reality Labs Inc needed to find a use for what was, in effect, an application without a cause. With the release of VistaPro2 they've done exactly that.

The new version has been revised dramatically and now offers the kind of power that professional animators and still-frame graphic artists demand.

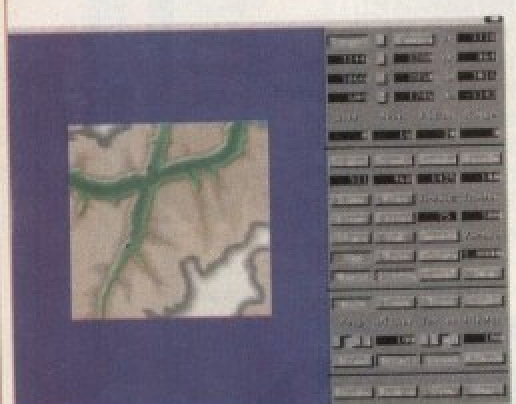
Before we delve into the program's latest enhancements, it's perhaps worth recapping the basics of the program itself, with a brief guide as to exactly what a scenery generator is, and what it can offer.

Perhaps the best place to start is with the landscapes themselves. Although the program is capable of generating random fractal landscapes and islands, perhaps the most interesting starting point for any would-be traveller is on one of the supplied DEM landscapes.

DEM stands for Digital Elevation Model. The data for these models has been compiled via official US geological surveys which sampled the ground level every 25 metres over the entire northern United States.

As a result, once a DEM is loaded, your machine holds an incredibly accurate 3D model of the entire region in question.

Around 20 DEM files come as standard with the software, giving you instant access to famous landmarks such as the Grand Canyon, Mount St Helens – before and after the eruption – El Capitan in Yosemite, and so on.



VistaPro's stylish interface, clean and simple with hidden depth ready and waiting

Interplanetary

Thanks to the United States' exploits in space, the available landscapes aren't restricted to the Earth. The collection even includes DEMs depicting Olympus Mons on Mars!

If the included files aren't enough to whet your appetite, VRLI have another 2,000 landscapes ready and waiting.

As I mentioned earlier, DEMs aren't the only source of landscapes, as the program can create its own fractal landscapes to order – either as islands or entire regions.

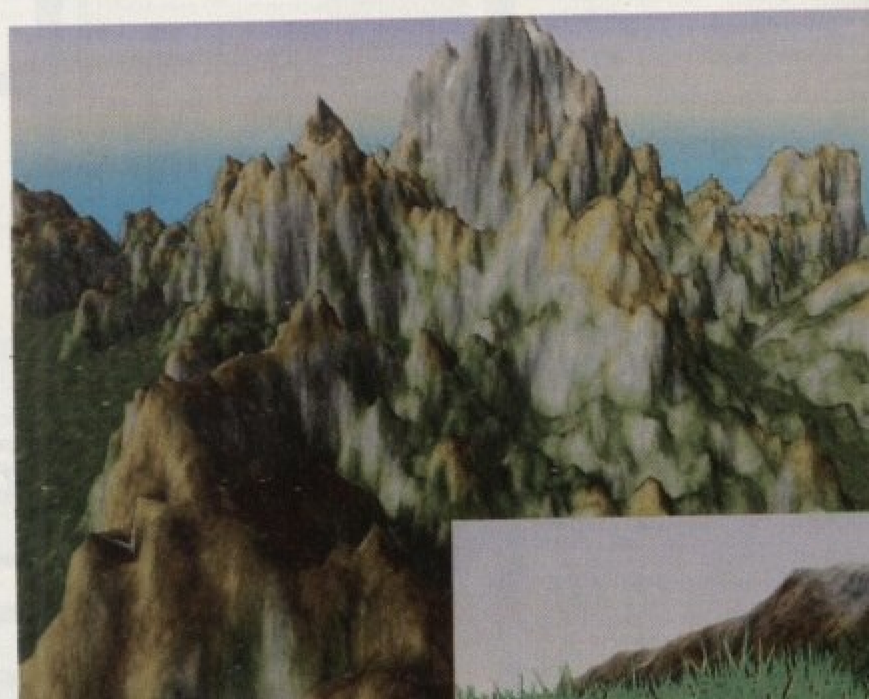
Although the process of random generation is indeed haphazard, the results are, more often than not, stunning to say the least.

If we assume the program now contains a landscape, the next task is to add the natural features which transform a lump of fractal rock into a living, breathing entity. It's here where the new program really starts to shine. The first task is to set the climatic constraints on the environment by assigning the sea level, tree line, snow line and haze.

Adjustment of the first three parameters is simply a matter of assigning an altitude for each. The fourth option is one of the all-new additions to the program. As you've probably guessed by the name, the haze definition allows you to define atmospheric distortion at a predefined distance. Low values produce a misting effect, while higher levels bring on a real pea souper...

Once the atmosphere and its effects have been taken care of, the next task is to embellish the land with the odd bit of greenery. This again is another new feature.

You now have the choice of palms, oaks, pines or cacti with which to populate your imaginary land. The choice isn't limited to a single type of plant – you can add all four variants to a single scene if



Transform your phone number into an instant landscape



Fractal foliage sprouting all over your virtual world

Importing the real world

The icing on the cake lurks within the program's Property pull-down menu. Here you'll find a whole series of options which help translate the 3D world of Vista into the two dimensions we humans know and love.

For example, the colour map within the program can be exported to DPaint as a standard IFF and then re-imported with varying degrees of altitude or alternatively as specific features. All are added by a few simple mouse strokes in DPaint.

As a result, if the altitude option was employed, it's possible to either draw or scan a conventional Ordnance Survey map, and then have Vista translate this into a virtual 3D equivalent. Alternatively, you could take another route and export the colour data representing the actual features of the landscape.

As a consequence, adding a line of trees is simply a matter of drawing a line in DPaint and then re-importing the new colourmap back into Vista. It's even possible to add simple builds by the same process.

What Makepath is to animation, Terraform is to land shaping. As a result, it's an essential additional tool for those interested in real-to-virtual world conversion, because lo-res DPaint images produce very stepped and unnatural landscapes – this is where Terraform comes into its own.



An Imagine space craft added to the image thanks to Vista's forground option

required. Once the variety or varieties are defined, the next task is to assign their size in metres and relative density. At this point, experimentation is the key to realistic results. If the trees are too small or perhaps to thinly spread they can, and often do, look ridiculous.

Having said that, with some patient experimentation and intelligent camera placement, the additional foliage can really breath some life into a otherwise sterile scene.

To be honest, real close-ups don't do the program any favours, as even the best attempt at a fractal tree can't really hold a candle to its organic equivalent.

The only other slight whinge concerns the rather methodical placement of the trees themselves. The end result is a forest which appears to have been sown by a chartered surveyor rather than a bearded, beer-guzzling lumberjack.

Still, if more than one variety is on hand it does help to break the monotony, as indeed does the fact that the trees vary – even within a single variety – from plant to plant.

The final addition takes the form of optional waterways. Either rivers (which automatically meander down to the valleys) or lakes (which flood the lowlands) can be selected. The two can be combined to add even more variety to the scene.

Watery grave

All such additions are controllable, in as much as you're given the option to accept or cancel before committing large tracts of your new world to a watery grave.

Once the actual scene-setting is complete, the final design tasks are to either adjust or load the colour palette for your particular scene. If you want to create the very Blue Ridge mountains of Virgina, you can.

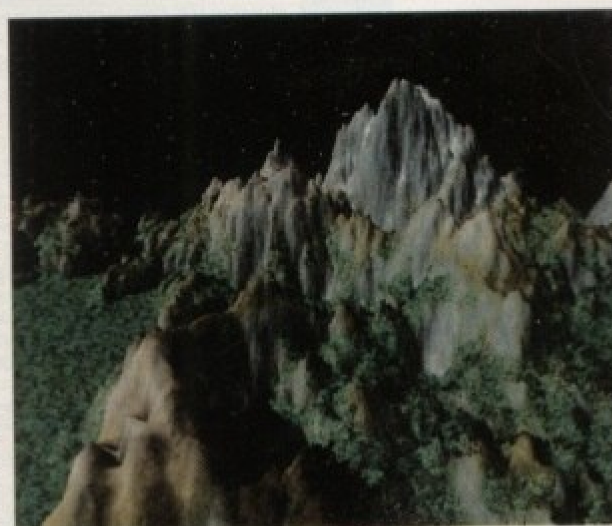
Alternatively you can transform an existing lush green landscape into an arid desert by simply applying the colour map of another more desolate DEM.

The colour map screen gives you the usual palette adjustment options every DPaint fan will be familiar with, plus a completely silly option to listen to the landscape as it renders via the Amiga's internal sound.

As a result, you can now hear creative process as well as enjoy the finished product. As I said, a silly but amusing addition. I can only assume than VRLI are not adverse to the odd mushroom themselves...

On a more serious note is the essential option to lock the colour palette of all frames destined to become a part of an animated sequence.

If for the moment your only real interest lies in still-frame creations, the option to lock the palette of numerous frames may seem unimportant, but to the animator, locking subsequent frames to the original is essential to achieve continuity.



Mountains by moonlight, just one of Vista's optional aerial effects

For the professional user, perhaps the most important addition of all is the much enhanced output. This alone is sure to transform a formerly interesting application into a really powerful artistic tool.

Continuity

With the option to output your creations as RGB or 24-bit IFFs or even DCTV display files, the commercial door has been swung wide open.

The program will output individual frames or entire animations in the format of your choice. These could be individual sequential 24-bit files, ready for still frame recording on high-end video kit, or for compilation into Vista's own proprietary Vanim format which allows you to play your sequences direct from disk.

All standard Amiga display formats – including Ham – are on offer, plus the option of applying full video spec overscan and interlace.

This leaning towards animation may appear slightly confusing considering the rather limited animation options within the basic program – the reason is that the internal options are only the beginning of VistaPro's animating potential.

The program only really starts to shine as an animation tool when combined with the additional Makepath program which VRLI offer as an addition to the original package.

Thanks to this beautifully simple and immensely powerful program, it's possible to skim the surface of your creation in a anything from a cruise missile to a helicopter, twisting and turning as you go, following every contour of the land and banking with every turn.

In short, I think the results speak for themselves. VistPro 2 is indeed a memory and accelerator-scoffing beast, but for serious artists it's a tool you simply can't afford to be without.

● *For a full review of Makepath – and Terraform, its landscape-creating counterpart – make sure you read next month's Updates column.*

Subtlety or speed?

The scene is set, the camera's ready, now all that's needed is an exposure. This is the point at which you have to make a decision.

If you want real quality as shown in several of our examples, it's going to take time, and in scenes with numerous additional features such as trees, graduated skies and high levels of image enhancement, the average unaccelerated A500 is looking at an overnight exposure for a single frame.

The reason is that VistaPro isn't simply a number-crunching fractal generator but, in fact, a full-blown, high quality ray tracing program to boot. The highest quality output combinations are very fine indeed and as a result there's no way of avoiding vastly increased rendering times.

Having said that, if you're planning to employ VistaPro2 as a fast action animation tool, it's doubtful that you'll need the very highest quality in every frame. As a result, rendering times can be dramatically improved.

If you can survive without the smallest possible polygons, truly life-like textures and assorted shading and blending techniques, you can save hours or even days in rendering time.

Similarly, smaller screen sizes and lower resolutions help immensely. Basically the choice is yours – if you want the best, you've got to pay for it, either through long rendering times or expensive additional acceleration.

Get it in perspective

Having completed the creative stage, the next task is to select a placement for the camera and the target or finishing point for a fly-through animation.

Selection of the two points is simplicity itself – you simply click on either target or camera and then select two likely spots on the landscape.

If you want to check your placement, the Preview icon transforms the landscape area into a wireframe representation of the image. A crosshair appears allowing you to make the final adjustments which are automatically updated in the numerical input windows.

When you're happy with the appearance of your panorama, the X,Y and Z co-ordinates can be locked either singly or as a whole, preserving the perfect viewpoint.

Aside from simple still frames, VistaPro2 – even in its standard form – is capable of basic animation. All that's required is a starting point or camera view and a target to travel towards.

Once the two points are established, the software asks for the desired number of frames and the program automatically begins the rendering process.

The only limitation is that the flight path is strictly limited to straight A-to-B. To be honest, even with this limitation the effect for the first time user is nothing short of astonishment, especially if the anim is in one of the higher resolutions.

Just like the still-frame alternative, the fly-through can be previewed in its 3D wireframe form, so any potential collisions can be spotted before committing your machine to the lengthy rendering process.

VistaPro is available from:
Genisoft Ltd
Unit 3 Poyle 14, Newlands Drive
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Slough
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In the

During last month's Updates column I promised to review a frame grabber designed to work directly with the Harlequin 32-bit graphics card. On arrival it transpired that the kit in question isn't merely restricted to the Harlequin, and is in fact ideal for grabbing in a whole range of formats, Ham included.

After a few hours it became clear that this particular hardware/software combination is worth far more than a simple mention in Updates, and could be the ideal answer to the question of real-time frame grabbing across the board.

Unfortunately for A500 users the new system is reliant on Zorro slots which are only found on the A1500 and above. As far as I'm aware there are no plans to port the system over to the 500, so I'm afraid it's a case of upgrade or settle for another system.

Composite inputs

The grabber itself comes on a hard card-style board, offering two composite inputs on the rear. The restriction of composite is perhaps the only chink in the armour of the system – as far as professional users are concerned.

The average serious enthusiast/professional is more likely to require S-VHS and upwards as a potential grabbing environment.

Having said that, I think the results speak for themselves. All the images in the article were captured via a very ageing and average S-VHS VCR providing a composite signal to the card. The two available inputs can be toggled via the software, providing the ideal setup for the professional user.



In fact, up to three cards can be placed in a single machine, offering a total of six potential source machines all controlled from the software simultaneously.

With the hardware and software safely in my sticky little fingers, it may seem strange that the article is flagged as a preview rather than a review. The reason is that both the manual and the software are in German.

As a result, a complete and in depth review is understanderbly a bit tricky. Nevertheless you can rest assured that when the English version arrives, any fresh information will be instantly posted in Updates.

According to Amiga Centre Scotland's Martin Lowe, an English version is already on its way with the manual to follow as soon as the translation process is complete.

Aside from pure grabbing power, the most important aspect of any system is its interface. In this particular area Vlab does extremely well, even with its present linguistic difficulties.

The program can appear in one of two forms, either as a full screen interface or as a dormant pull-down menu on the Workbench screen.

The only restriction is that the program only operates on machines using WB2. As a result, even A1500 and above owners still working with WB1.3 haven't totally escaped a certain amount of incompatibility.

If you're thinking of upgrading to WB2, this is the ideal excuse. The insistence on WB2 isn't merely a matter of basic software compatibility. The program actually puts the additional features of WB2 to good use.

For example, whenever the program is exited it automatically saves the present setup to the ENV directory. As a result, every time you return to the program your favourite settings are automatically installed.

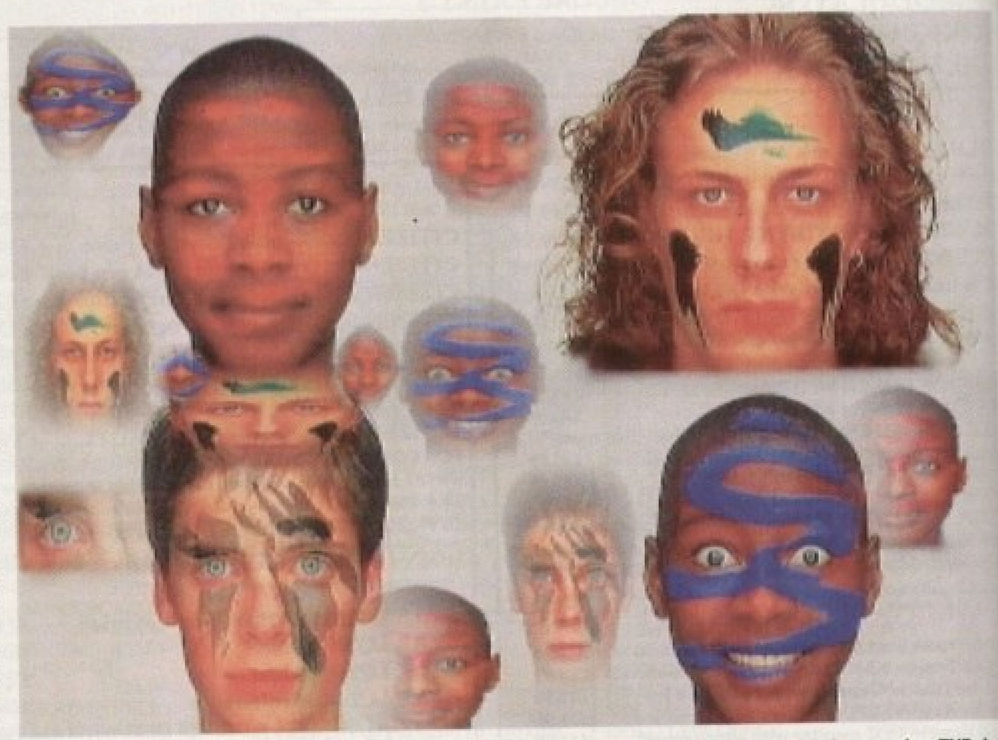
The necessity for only pertains to the Kickstart ROM, so there's no need to invest in an entire enhanced chip set. Fortunate really, as you're more likely to come across a bucket of chickens' teeth than the aforesaid upgrade.

Once active, the first job is to open the monitor which appears as a small, independent Workbench window or PIP, housing a constantly updating display of the incoming video signal. The window can appear in anything from four to 16 colours or alternate levels of greyscale, in either interlace or med-res.

The beauty of the window system is that when in menu bar mode the window sits quietly alongside the assorted Workbench clutter, happily displaying the signal. When an appropriate grab appears, a simple click on a small accompanying control window instantly captures the image.

Actually capturing images is literally that simple – you merely sit back watching your miniature TV waiting patiently for the optimum moment to click on the control panel.

A particularly pleasant aspect of this additional panel is the option to switch between capturing the complete interlace image or merely a single field.



Multi grab compilation, curtesy of Vlab, AVideo and the amazing TVPaint

High speed images

The beauty is that when you're dealing with high speed images, sacrificing a field within the interlace signal is often well worth the lose of clarity. Obviously a non-interlaced image isn't quite as impressive, but it does abolish the perennial problem of the dreaded interlace flicker.

An additional weapon in the anti-interlace armoury lurks on the pull-down menu. If you happen to capture a flickery but nevertheless impressive image, a de-interlace option can be applied to remove the offending field after capture – instantly transforming a migraine-inducing grab into a perfect picture.

Once grabbed, the captive can appear in all standard Amiga colour and resolution combinations, either with or without Floyd Steinburg dithering.

The actual importation process can also have a variety of filters available to produce the optimum image. As you've

Sequential selection

Although singular grabs are impressive, they're not the limit of the system's capabilities. With the assistance of the ever-present pull-downs, you can access the sequential grabbing option which allows you to grab a maximum of 255 frames from the live video source.

Aside from the system's pure image quality, this has to be one of its most impressive capabilities. Vlab grabs all its imagery in its own proprietary format, namely YUV. As a consequence it's possible to grab 24-bit sequences and then convert from there into the format of your choice.

As far as I'm aware, Vlab is the only independent grabber to offer such power. Obviously sequential frame grabbing is very memory intensive, so investment in a large amount of extra RAM is essential – especially if you're planning to employ the system's 24-bit output. While on the subject of memory and possible expansion, it's worth mentioning the system's liking of both RAM and acceleration.

If there's a slight flaw, it's the program's preference for copious amounts of memory and acceleration, especially during a sequential grab. During testing I employed the services of a GVP 030 combo card with a whopping 16Mb onboard. Although I never ran out of RAM, there was a very significant slowing of additional software, even when the program was empty. To be fair, the program itself remained faultless, but I'd say it's not a particularly good idea to employ the system in the midst of a busy multitasking environment.

My only real concern is the grabbing rate of the board – unlike the majority of systems, it samples at a maximum of 18 frames a second, as opposed to the 25 frames which some others offer. Having said that, the de-interlace and single field options plus the impressive 24-bit spec more than make up for that particular compromise.

frame

Paul Austin previews Vlab, the latest and arguably the best real-time frame grabber yet to appear on the Amiga

Saving and storage

Yet another innovation is the system's preferred capture and storage format. Vlab is the first serious application to employ the impressive YUV file format. All captured images are stored in it and then converted to a particular display medium, whether that be 24-bit or two colour – the choice is yours.

The beauty of YUV format is primarily its size, which on average appears be approximately one-third that of an identical 24-bit IFF, and yet still retains all the relevant colour data. The only problem – as with any new format – is its incompatibility with existing software.

To combat this, Vlab offers the option to save out a standard Amiga/24-bit IFF. According to Amiga Centre Scotland's Martin Lowe, this minor inconvenience should soon be put right thanks to the inclusion of a new YUV loader and saver in the latest version of ADpro, plus an option to import the board's output directly into the program.

Martin went on to mention that Version 1.7 of TVPaint – which is due for release shortly – already supports YUV within its Load and Save options. As with all upgrades of the offensively expensive TVPaint, this new version will be free to all registered users.



A Harlequin creation made in moments with VLab's direct to Harlequin output

probably guessed, I'm as impressed with the combination of hardware and software as I'm sure you are with the images it provides.

Vlab appears to be the system that the majority of graphics fanatics have been waiting for. If support for the YUV file format goes ahead, Amiga Centre Scotland could well have a monster on their hands.

Hopefully MacroSystems, the company responsible for the system, will widen their horizons and include support for other boards such as the new Avideo from Checkmate. Only time will tell, but if any developments occur you'll be the first to know...



A Ham example of an instant image



A classic animation captured forever

The Harlequin connection

If there's one thing that the premier graphics card has sadly lacked it's the option to grab live video. Now that is all about to change.

Thanks to the program's Output pull-down, the captured image can be displayed in a variety of ways, Harlequin included. Rather than saving the captured file and loading it back onto the Harlequin, the software has a direct connection to the board and instantly ports the 24-bit image straight onto it.

This leaves you with two options – either you can use the Harlequin image as a reference point and save the 24-bit data directly to disk, or alternatively you can go straight to TVPaint and employ its Keep Screen option which boots TVPaint while retaining the image.

ARexx capabilities

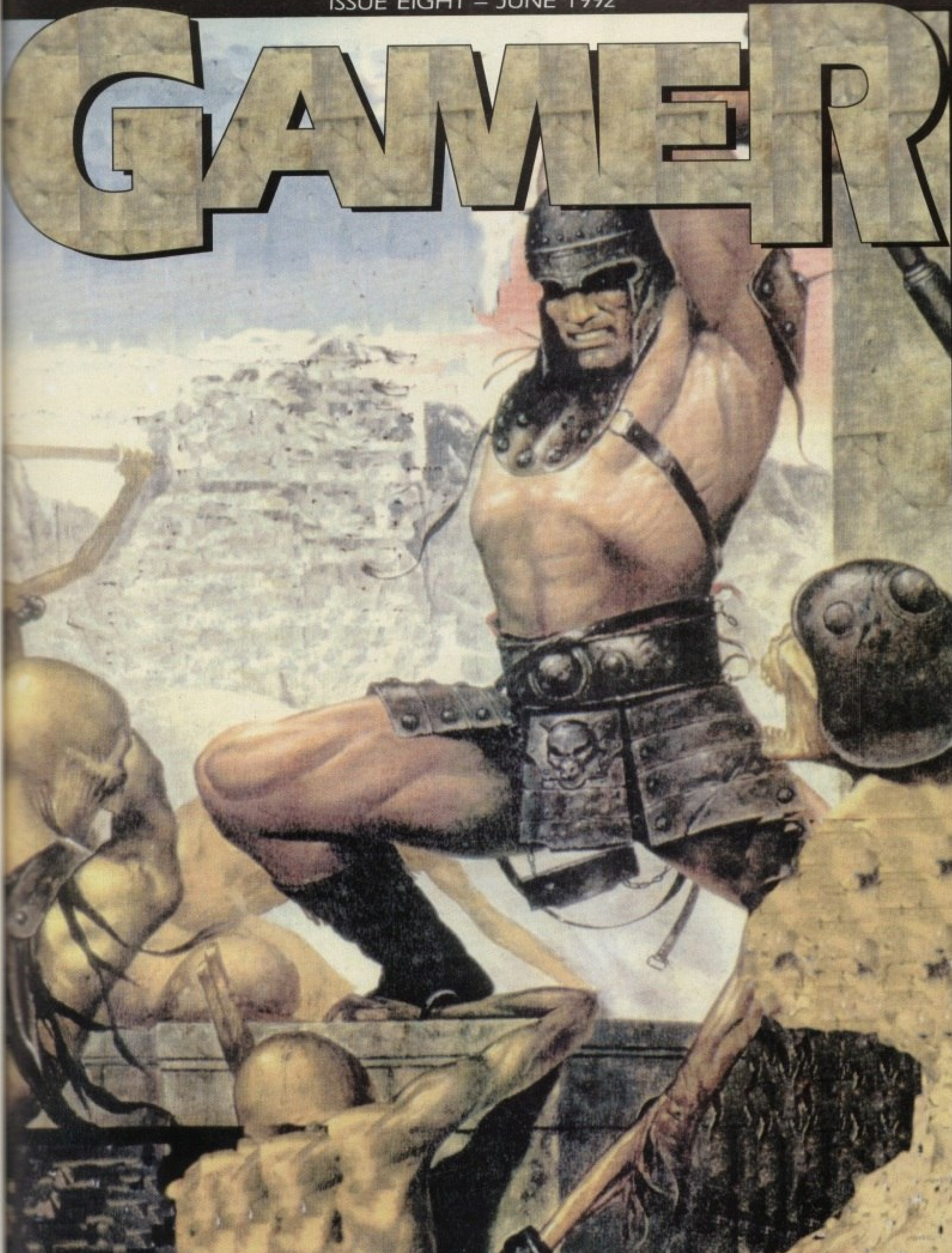
Like all the latest high power hardware and software combinations, Vlab boasts an impressive range of ARexx commands that cover all the system's major functions. Perhaps the biggest impact is made by the potential ARexx control of the software's sequential grabbing option.

With a relatively simple ARexx script, an impressive stop frame recording sequence should be simplicity itself. The software has a complete pull-down dedicated to ARexx macros, five of which come as standard with it. Also, ARexx can be addressed directly from the software via yet another pull-down-inspired control panel which allows you to execute additional ARexx scripts manually.

PUTTING THE BOOT IN

ISSUE EIGHT – JUNE 1992

GAMER



: : THE UNSTOPPABLE GAMES MACHINE :

PLUS...

REVIEWS... POPULOUS II • ELVIRA THE ARCADE GAME • SHADOWLANDS • CRIME CITY • GOLDEN EAGLE • BIG RUN • BUDGET ROUNDUP •

ALSO... ANOTHER WORLD SOLVED • HMV TALKING SHOP • ONWORD •

ONword

Gamer survived fat foreigners and billions of insane marathon runners just to bring you the news from the ECTS in London

Core blimey!

One of the highlights at ECTS was finding out that there is going to be a sequel to Chuck Rock. Chuck Rock 2 – Son of Chuck features, as you might guess from the title, Chuck Junior.

Chuck Junior's task is to rescue his father who has been kidnapped by Chuck's main business rival, Brick Jagger. We saw a rolling demo of it at the show and it looks even better than the original game.

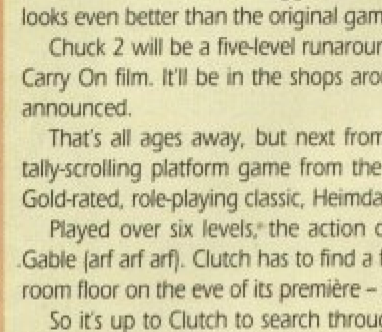
Chuck 2 will be a five-level runaround and features more fun and japes than a Carry On film. It'll be in the shops around November, and the price is still to be announced.

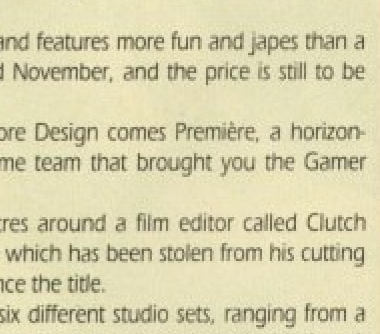
That's all ages away, but next from Core Design comes Première, a horizontally-scrolling platform game from the same team that brought you the Gamer Gold-rated, role-playing classic, Heimdall.

Played over six levels, the action centres around a film editor called Clutch Gable (arf arf arf). Clutch has to find a film which has been stolen from his cutting room floor on the eve of its première – hence the title.

So it's up to Clutch to search through six different studio sets, ranging from a western, a horror, a fantasy and a cartoon through to a B-movie and a black-and-white set. We saw the game running at the show and it looks brilliant.

Première will be out at the beginning of July for a measly £25.99.





Give give give me mower mower mower



Hands up who thought the British Film Industry was dead? Well to prove all you doubters wrong The Lawnmower Man – which was produced by London-based company Allied Vision – has arrived in Hollywood.

The film entered the US film charts at the number two slot, closely behind Wayne's World. Having cost only £6 million to produce and taken $17.5 million dollars in its first ten days, you know that somebody, somewhere is sitting on a big stash of cash.

The film itself is an adaptation of the Stephen King short story of the same name, and it's the first to tackle the subject of virtual reality.

The story goes a bit like this. A scientist played by a guy called Pierce Brosnan (who?) uses special technology in which participants can be made to believe that they are actually experiencing life in a computer-produced artificial world. He utilises his knowledge to help a gardener – who has the mind of a small child – to educate himself.

Disaster strikes and the gentle gardener becomes a super-intelligent madman who has virtual reality sex sessions with the town beauty (oooer, missus) and eventually takes control of the local community.

I suppose all you readers are screaming: "This is a computer news page, not a blooming film review!". Well calm down because here comes the computer news.

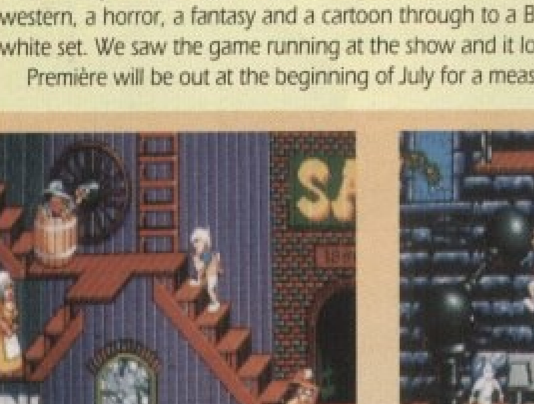
The Sales Curve, the company who produced Indy Heat, Rodland and SWIV, have signed up the worldwide rights for all computer console and multimedia formats.

The good news is that The Lawnmower Man is due for release in June with the video following six months later. The bad news is that the computer game won't be released until the Spring of 1993. Nobody knows what kind of game it will be, but it'll definitely be one to watch out for.

Nothing is Zool

Gremlin's most unusual release yet could be one of the games of the year. Zool – The Ninja of the Nth Dimension looks as though it could be the Amiga equivalent of Mario and Sonic.

The game will feature full-screen scrolling (wooI), stunning graphics (gaspl), incredible gameplay (guspl), audible music (yowsersl) and sizzling sonix (wow!). Well that's what the press release says, and you know what? They could be right.



Gamer saw a small demo of Zool months ago and since then it has come on leaps and bounds – it's looking quite splendid. Only God knows what Zool will be about – all we know is that the little chappie is an alien ninja.

Zool will feature seven worlds, each containing three levels with different maps and puzzles to complete. Zool will be sweet in the sweet world, musical in the music world, fruity in the fruit world and in the tool world he'll be, err...well, let's leave it there shall we?

Zool will be out in July and will cost ten pence. OK, so it's not ten pence, but that's because the price is still to be announced.

I've got the power



Loriciel's newest is an action-adventure-platform-shoot-'em-up kind of game, entitled Jim Power. Oh dear, the President's daughter is being held to ransom by Vulkhor, the devil of the mutant planet.

In exchange for a weapon that will enable him to rule the universe, Vulkhor will let the President's daughter go. If his demands are not met, he will turn her into a salivating mutant – not a pleasant experience.

But if his demands are met, the lives of billions of people are at risk. Hmmm, a bit of a tough decision that. I know – let's send in Jim Power, wearer of clean underwear and all-round good guy. He'll save the universe and the President's daughter.

Right, this next bit will only impress the true technical people among you. Jim Power features three levels with three play fields and two levels with 12 levels of depth. It all runs at 50 images a second.

I don't know – it all sounds like French to me. There are 12 sets of music by Chris Huelsbeck, who was the guy who created the music for Turrican. The game also boasts more than 200 colours on-screen. We played the demo/preview of level one, and we were suitably impressed.

Jim Power will be out at the end of April for £25.99 and you can expect a full review of it next month, probably.

Ugg ugg ugg

They're crazy, intelligent, funny and cute. They're The Humans, and they're about to become the characters of 1992.

The Humans is a comic look at the evolution of mankind. Set in prehistoric times, the game allows you to shape the species into what we are today.

There are 100 levels, each with a different challenge. Challenges range from the easy to the very difficult – for instance, you might have to discover fire one minute, then go and invent the wheel the next.

This won't be easy, especially with other human tribes harassing your humans and, of course, there are man-hungry dinosaurs to contend with.

From what we've seen of it, Mirage Software could well have a winner on their hands. The Humans will be available at the end of May at £29.99. Expect a preview or even a review in Gamer very soon.



The slug bug

Slimy, slippery and err, sluggy. Steg the Slug is Codemasters' great new cartoon puzzle game. Set deep underground in a series of dank caverns, Steg's aim is to keep as many of his babies alive as possible.

To do this, he must ensure a supply of their favourite food – maggots. Steg can slither along platforms, climb walls and even slide along ceilings blowing bubbles to trap the speedily crawling maggots.

Once trapped in bubbles, the maggots float and Steg has to give chase and blow them into the babies' nest. Sounds easy, doesn't it? Well you're wrong. Each cavern is full of hazards and traps, stalactites and stalagmites plague the caverns along with vicious bellows which pump air through the tunnels.

To make things easier, Steg can collect special icons and power up with robotic legs, jet packs, speed-ups and many more. In fact, this is Codemaster's greatest game yet. The cartoon graphics are brilliant, it's highly addictive and very playable. Priced at a very cheap £7.99, Steg will be in the shops very soon.

Of course there will be a full review in Gamer very soon.



THE DREAM TEAM

carrier bags - richard "tesco" williams
chimney sweep - daniel "van dyke" whitehead
fopping around - biffa "biffa" maddock
tricky stuff - darren "anorak jr" evans
man of steel - phil "thunder" morse
design blokes - terry "pfft" thiele
tym "rasp" lecky
mike "ooh" hardman
now a major motion picture

ad sales - ruth priestley
jane conway
0625 878888

life is something that happens while you're making other plans

climax

next month: dustin hoffman and color me badd play speedball 2 plus! yazz's pascal tips!

GAMER INNER VISION

It's better than Kylie's new single...

REVIEWS

REGULARS

War! Wha



SPECIAL

MICROPROSE • £34.99 •

GAMER GOLD



Ah look, a handy helicopter pick-up service. Thank God for that, I thought I'd have to use the bus again!



I'm completely surrounded by the enemy, I'm about to die, I'm, I'm, I'm going to cry. Boo hoo



A map. Now where's the nearest McDonald's?

War games, eh? When was the last time you played a decent war game? I bet you haven't played a good one for years. In fact the last war game I can remember was Airborne Ranger from Microprose, so it comes as no surprise that Special Forces is from the same company.

Microprose are ultimately famous for their simulation games such as Formula One Grand Prix, Knights of the Sky, F-19 Stealth Fighter and even Microprose Golf. If you want a simulation game, then these are the dudes to get it from.

Special Forces is sort of a mix between watching Rambo and the International Chess Championships. It's a shoot-'em-up with a hefty bit of strategy thrown in for good measure.

You get to control a squad of eight butch, hard, kick-ass, your mother wouldn't like 'em soldiers. You can only take four men into action at a time and each one has different attributes.

For instance, if one mission asks you to blow up something, you'd obviously be better picking Mike Kolowsky who's an explosives expert rather than choosing someone who just looks 'ard.

Once you've decided who you're going to take to the warzone, you have to give them assigned codenames, choosing from the not very original list of Shark, Cobra, Tiger and Eagle.

I suppose changing the butch codenames doesn't look good in the middle of a fire fight deep in enemy territory, especially when your boss shouts "Oi Dingbat, take point, and Flat-eared Racoon, you form a pincer movement with me". Rather than die from a hail of bullets, the enemy is going to die from laughter.

Right, you've chosen your four men – they now need something interesting to do. There are 16 missions available to each squad. The missions are set in four areas of the world – Tropics, Desert, Arctic and Temperate.

There are several things to see and do in each mission, in fact I could even be Judith Chalmers for this next bit.

"Hello and welcome to Wish You Were Here. This week I'm off to the desert to a secret location to do a bit of tank-busting, and Bob Holness – our star holiday reviewer – is off to the tranquil tropics to rescue a prisoner of war.

"Well as you can see, it's all fun and games here. Now to the Arctic for our first report, where..."

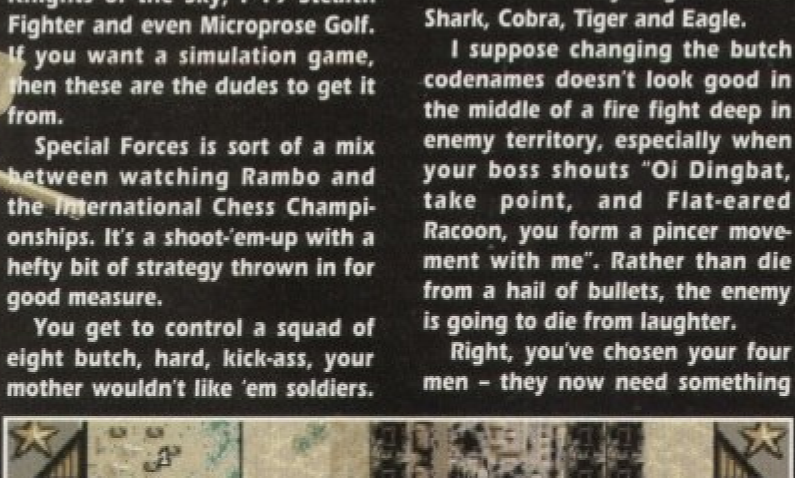
Each mission has a clearly defined objective, so if the mission report says that you have to blow up some fuel dumps, you have to go and blow up some fuel dumps.

Working out what you have to do is dead simple – actually achieving it is whole different kettle of fish. It's war out there chaps! The enemy aren't going to let you walk into their camp, blow up some fuel dumps and walk out again, oh no. They more often than not outnumber you a hundred to one, and each one of the enemy soldiers is after your blood.

To help you in your quest, thankfully, there are big guns for you to use. Maybe you'd like an off-the-shoulder Lee–Enfield rifle or maybe a lovely Engager Machine rifle or even both. To be honest, once you've kitted out your squad with all their, err, umm kit then it really is off to war.

On every mission you are "dropped off" by a helicopter and you get to decide the "drop points" by using the ever-present and highly useful map. The map shows you all the buildings, roads, rivers, bridges, Pizza Huts, local places of interest and even where your main target is by plonking a little white circle round it.

If you press "I" on the keyboard,



Wow, did I do all that destruction to those tanks? No, it was Jim who is currently standing behind me with a rocket launcher. Oh



Help, is anybody out there? I'm lost, Help, please. What was that growling noise?

What's it good for....

FORCES



Oh my word, don't they look hard, I'm out of here! Wait a minute, I'm in charge of these guys. Cripes!

½ meg ▪ Joystick ▪ Out now



Pack up your troubles in your old kit bag and smile, smile, smile...



I am abseiling, I am abseiling, across the sea... well across the jungle really

the map lights up with loads of little red dots. It really is quite terrific to watch (those red dots are actually the last known whereabouts of the enemy soldiers – Ed). Oh dear, are they? Whoops, never mind, they still look dead good.

Once out of the map option, you view your squad from up above, a "plan view" kinda thing. If you have ever seen the excellent Alien Breed by Team 17, then Special Forces is sort of like that, but smaller.

Now you might be pondering the question "how do you control four members of the team at the same time?" and the answer is, you don't. You can only control one Rambo at a time, but you can put your team in formation. Then when you move your team member, the rest of the team will follow him about.

You can swap and change between team members by hitting the F-Keys. A handy option is Multi-View, which allows you to view all four team members at the same time – sort of like a four-team University Challenge view, but without Bamber Gascoigne.

If you are a sort of, well how can I put it, err, lazy git, then there is an autopilot mode. You know when you're playing a flight sim and you just can't be bothered to fly the plane hundreds and hundreds of miles? You just stick on the autopilot, set the waypoints and hey presto!, you don't have to do anything for 20 minutes.

Well the principal is exactly the same. You can't be bothered running through dense jungle shooting, so you set each team members a destination point, press the spacebar and the computer takes over.

Well that's basically it. You choose your mission, men and weapons, enter the warzone, run around for a bit, waste a few enemy soldiers, complete your objective, get picked up by the helicopter, go home in time for Coronation Street, congratulate your men by giving them a couple of decorations and even a promotion, have a few beers, go to bed and get ready for the next mission, Hurrah.

Overall, Special Forces is a bit of a larf. My word, it's fun running round deserts and jungles killing the enemy and blowing things up. OK, the graphics aren't going to make you leap out of your seat and shout "arroogggaa", but they serve their purpose.

In fact the intro is quite good graphics-wise, but the intro music is, well let's say it sounds as though it's been loosely based on the A-Team theme music. In the game there are some suitable machine gun noises and big beefy explosion noises.

Playability is brill. For instance at one point you might be wandering around the jungle by yourself, when suddenly enemy soldiers appear from nowhere and you have to leg it as fast as you can because you've run out of bullets. It's exciting stuff, this war business.

I don't know why I liked Special Forces. Maybe it was because it brought out my fighting instincts and that I knew I couldn't die, but when one of my team members was captured in the desert it brought tears to my eyes.

I instantly planned revenge – I went back into enemy territory, rescued my soldier and then I blew most of the enemy camp apart.

Boy, was I happy. I think you probably know the sort of feeling you get from Special Forces by now.

Special Forces, even though it's got that element of strategy, is still one of my current faves. Buy it now or Dan will come round to your house in his new big and beefy army boots and, well put it this way, do you like hospital food?

Jonathan

VISION

Fairly average in-game graphics, but the intro makes up for it.

AUDIO

Good sound FX, but naff "army" intro tune spoils it a bit.

PLAYABILITY

One of those games that lacks instant appeal, but once you're in, you're never out.

ADDICTION

One of the most "addictive" games we've had in the office for a long while.

90%



I can't bothered playing Special Forces, I'm going to put it on autopilot and go and make a cup of tea...

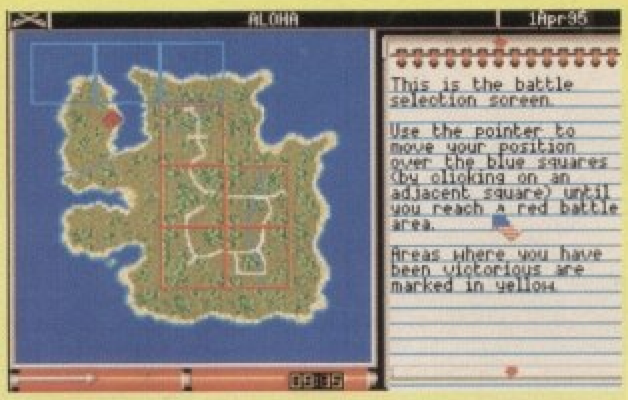


Corr, it's that infamous split-screen effect that was last seen in University Challenge!

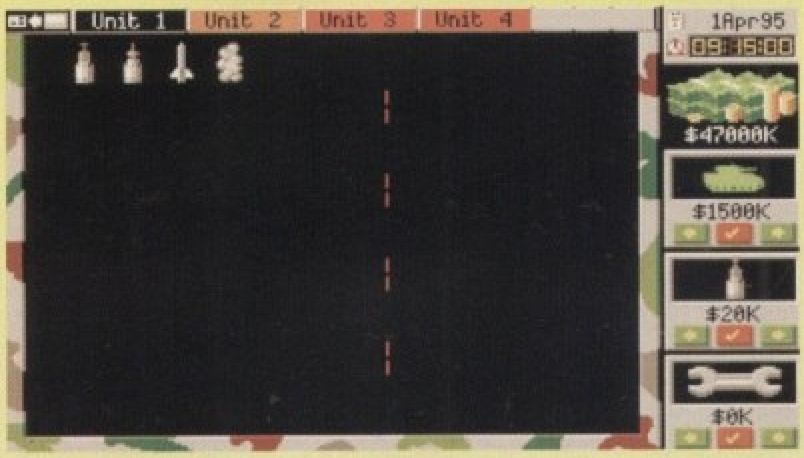
Armou

PACIFIC

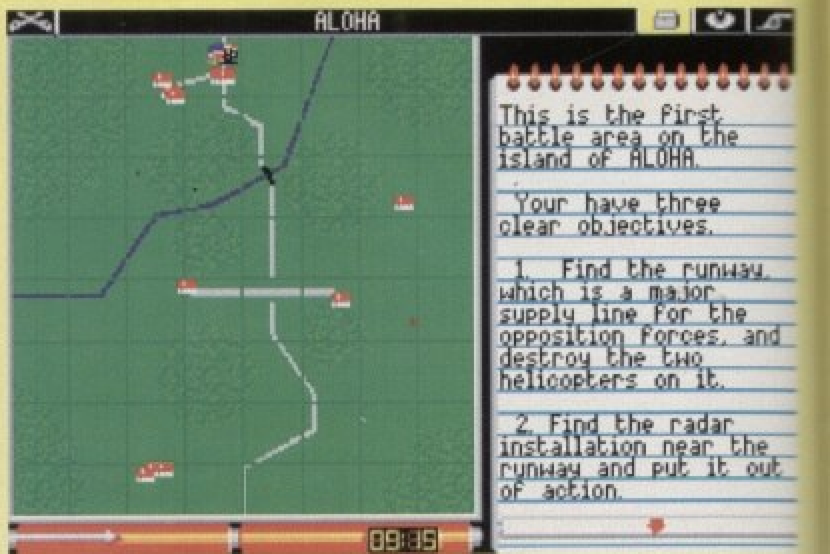
EMPIRE ▪ £29.99 ▪ 1/2 me



The sun-drenched island of Aloha, complete with palm trees and lots of Soviet tanks for you to blow up. This is my kind of vacation



As you can see, I've not quite made up my mind on which model to buy. "Excuse me, got anything in metallic blue?"



This is your mission description – the map shows the battle area. What a nice quiet country scene. But not for long, heh heh

It's time to set off to those sun-drenched islands in the Pacific Ocean. Just think of it – the warm climate, the sea, the white beaches and the hordes of commie infiltrators for you to blast into oblivion. This is my kind of life.

Pacific Islands (PI from now on) is the sequel to Empire's earlier tank game, Team Yankee. However, there are a few changes to the game which make it even more playable.

The scenario has it that a large force of disaffected Soviet communists, aided by the North Koreans, have invaded the Pacific atoll of Yama Yama.

Now this is quite unfortunate due to the fact that Yama Yama is a communications link for the early warning monitoring system in the Pacific Ocean, so the United Nations is understandably concerned about secret – and bloomin' expensive – communications equipment falling into enemy hands.

This is where you come in. You must assemble a team of tank units, four in all, which will be the spearhead of the first offensive, and you must recapture all five islands of the atoll to succeed.

You start on the island Aloha which you must traverse, destroying enemy installations and communications, as well as other commie tanks.

However, unlike Team Yankee, you actually have to purchase your tanks and their ammunition. You are initially given a budget of $55 million to spend (that's not much – Biff spends twice that on T-shirts – Ed) but you are able to gain more money during the game by destroying enemy installations and vehicles.

The enemy shoot back too though, so after each battle you can purchase replacement tanks for those that have been destroyed, repair damaged tanks and even increase the morale of your crew by having a booze-up.

All of this costs money unfortunately, so at some point you will find yourself running short. This is where you have the dubious option of selecting second-hand vehicles instead of brand new machines.



That will teach him to call my tank a Skoda

I can just picture it – a big sign outside a heavily fortified building with the words "Stormin' Norman's Used Warmongering Ware. Lowest Prices Around" written on it.

Each of the five islands you will be fighting on are split up into square zones. Blue coloured zones are free from enemies, allowing unrestricted passage to other parts of the island, while red zones indicate an enemy presence.

Upon entering a red zone, you will be taken to the purchase screen to buy your equipment, or repair vehicles damaged in a previous battle prior to engaging the enemy.

You are then given the mission description which lists the objectives to overcome in order to liberate that zone. When you have accomplished your mission, the red zone will turn yellow and you are free to move to the next square.

One of the reasons why I enjoyed Team Yankee so much was because it was game orientated rather than being a pure simulation. So the ability to choose your path through an island makes for a more strategic game.

For instance, it is important that you make your way to enemy-held zones which also contain communications equipment in order to destroy the transmitters. If you fail to do this fairly early on, you will find that the enemy will know of your location and you will be faced with increasing opposition making your life potentially rather short.

This strategic element makes PI



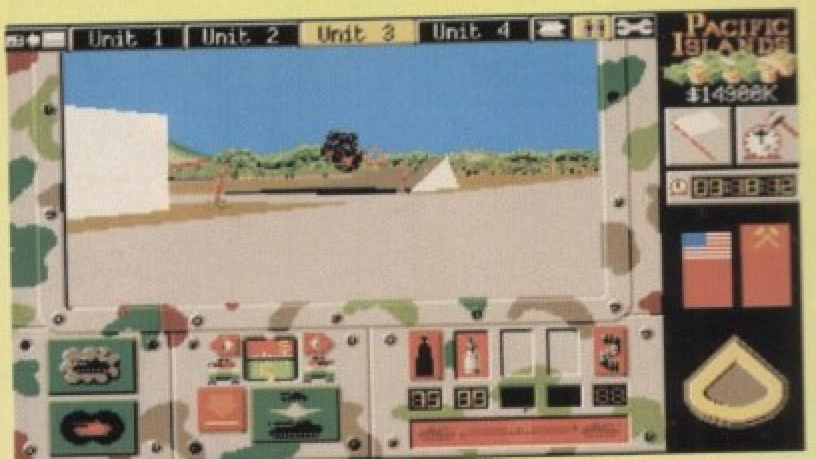
The Pacific Island tank formation team. What grace, what precision

in Aloha

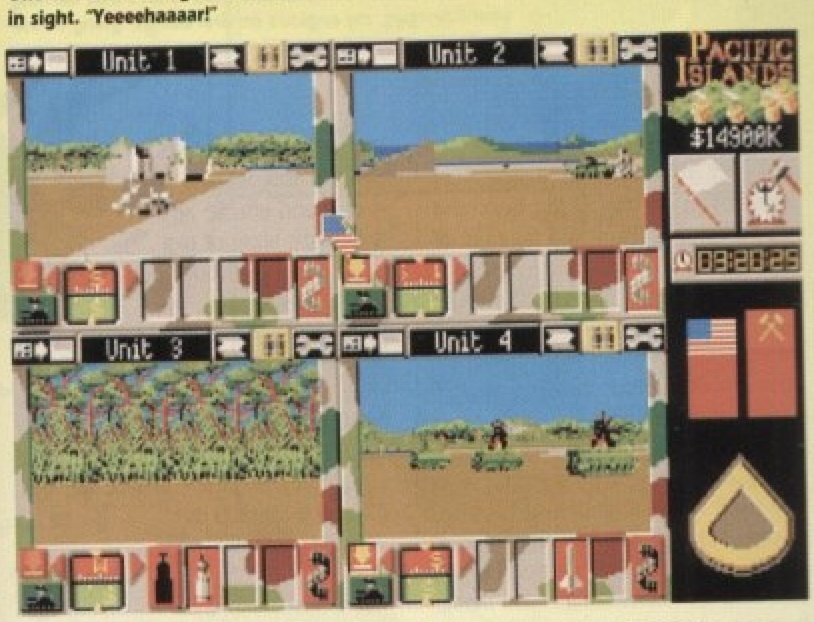
ISLANDS

GAMER GOLD

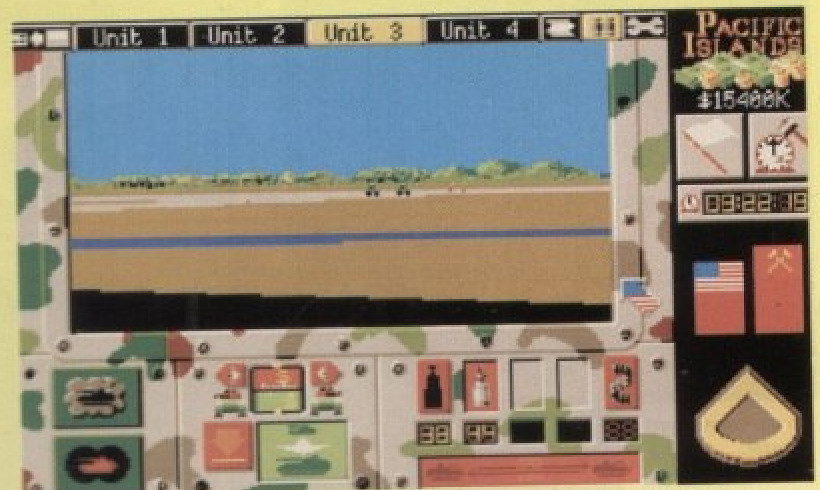
▪ Mouse ▪ Out now



One of the fun things about Pacific Islands is the fact that you can blow up everything in sight. "Yeeeehaaaar!"



This is the quadrant view which allows all four units and their viewpoints to be displayed



Using the long range view, I spot two enemy tanks approaching. Where's my Sabot?



Using the night sights, you can spot the enemy through smokescreens or in the dark

slightly more interesting than Team Yankee's rather linear approach to the play, while at the same time not being too much of a brain drain to destroy the shoot-'em-up feel.

The artillery support feature, where you can arrange for HE (high explosive), DPICM (Duel Purpose Improved Conventional Munitions) and SMOKE shells to be fired at certain times on specific areas, has a new addition with the ability to lay mines at critical areas on the map.

You have to remember where you put them though, otherwise you might find yourself trundling inadvertently over them only to find you are suddenly a vehicle short.

The control system in PI is almost identical to its predecessor, with a few minor additions. This is a good thing because the control system in Team Yankee was excellent and easy to use so any major changes weren't required.

If you have played Team Yankee, you will quickly be able to get into the game without having to wade through the manual beforehand.

For those of you who have not played Team Yankee, the 3D graphics are quite excellent. Not only do you have vector graphics but all vehicles are bitmapped. This gives greater detail than that achievable through vectors and improves the appearance of each vehicle infinitely. The actual 3D routines have been speeded up quite a bit and you are also able to destroy any object in the 3D view.

Because of the increased 3D speed, you will now occasionally come across a whole village, rather than solitary buildings. Such an object would have slowed down Team Yankee considerably. You will also find that the enemies' intelligence has been improved too, making them harder to overcome (oh bugger). There are no changes in the sound effects department, which is no bad thing at all, with the usual explosions as you let loose that lethal Sabot at some unsuspecting commie tank, or give him a good strafing with your machine gun.

The overall gameplay has improved quite a bit and I enjoyed playing PI. The improved speed in graphics and the ability to blast everything in sight makes the game great fun.

The packaging includes six full colour maps of the islands, which mark key features such as roads, communications and rivers, helping you to plan your strategy. The manual is well written, making it easy for those new to the game to quickly get into the action. There is also a "training" island for you to practice on.

Is it my imagination, or are software companies beginning to realise that people with hard drives exist and play games too? Empire have thoughtfully provided a installation program on the game disks for those of you with such hardware. Nice one, Empire.

So, if you have already sampled the delights of Team Yankee, you will not be overly disappointed at what PI has to offer.

Darren

VISION GGGGG
Excellent and effective mix of bitmaps and vectors.

AUDIO GGG
Not much variety but the digitised effects are effective.

PLAYABILITY GGGG
It's tougher than Team Yankee and has a more strategic element to it.

ADDICTION GGGG
You will be back to finish off those last few commie blighters.

90%

Made to make your mouth water, it's...

GAMER GOLD

PROJECT X



TEAM 17 ▪ £25.99 ▪ 1 meg ▪ Joystick ▪ Out now



Oh no, what a personal disaster...



Asteroids! Wait a sec, wasn't he in the Jetsons? (no that's Astro you fool – Ed)



Ha! You can't beat me, take that and that and that! What's that burning smell? Arrrggg, me engine's on fire! Zoinks, going down!

Do you remember Alien Breed? Yes, of course you do, it got a Gamer Gold way back in January and for a long time it was a firmer-than-firm favourite in the Gamer office

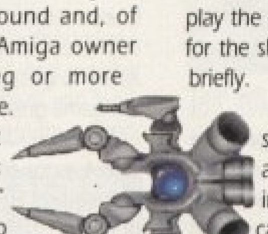
Now from Team 17 comes Project X, a no-nonsense shoot-'em-up, and thank God it's got absolutely nothing to do with that bobbins film of the same name, starring Matthew Broderick.

I don't know whether you realise this or not, but there hasn't been a decent shoot-'em-up for the Amiga since Xenon 2. Maybe it's because the whole games industry thought that Xenon 2 was just so good it couldn't be bettered – boy, how wrong they were.

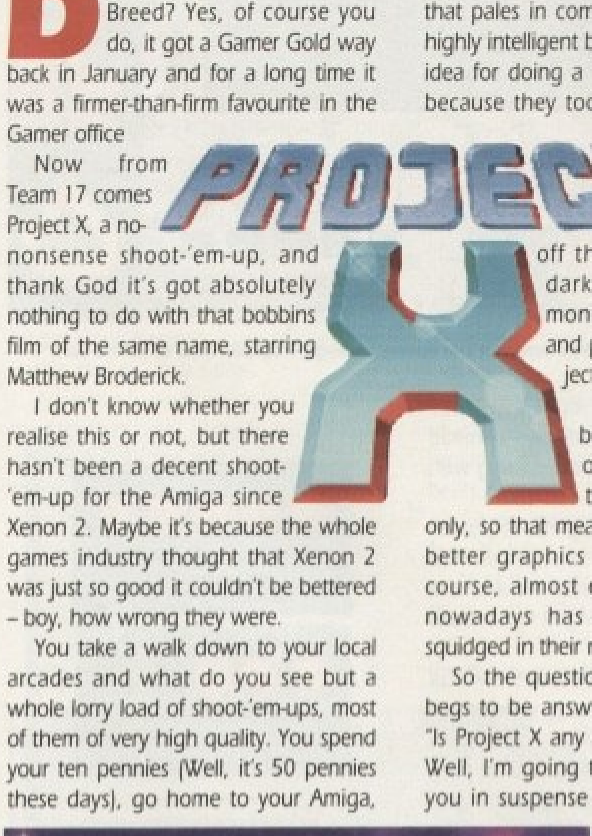
You take a walk down to your local arcades and what do you see but a whole lorry load of shoot-'em-ups, most of them of very high quality. You spend your ten pennies (Well, it's 50 pennies these days), go home to your Amiga, and any shoot-'em-up you play after that pales in comparison. Team 17, a highly intelligent bunch of lads, had the idea for doing a "classic" shoot-'em-up because they too were disappointed with the state of the current crop.

So off they went into their dark cupboards for months on end, writing and play testing, until Project X was born.

The major difference between Project X and other shoot-'em-ups is that Project X is 1 meg only, so that means more memory for better graphics and sound and, of course, almost every Amiga owner nowadays has 1 meg or more squidged in their machine.



So the question that begs to be answered is "Is Project X any good?" Well, I'm going to keep you in suspense over that one, because every shoot-'em-up has a awful story to go with it, Project X being no different.



Yikes, it's a, err, well, it's a flying, umm, thing

Some stupid scientists were messing around doing bio-mechanical experiments using some pretty powerful X-rays when they created some massive mutated insect-like droids.

It was a severe case of: "Oh dear, we seem to of created some vicious mutated insects. Let's dump them on the planet Ryxx and hope they degenerate and fade out of existence."

Of course, things don't run true to plan – the insects not only survive but thrive. Their computer intelligence circuits are corrupted and they set off seeking revenge.

You work for the space federation, and you're the dude who's been assigned to deal with the mutant insects – surprise surprise! Your mission is to fly to Ryxx, in the heart of the station where the evil insects have made their lair, and blow the whole thing sky high.

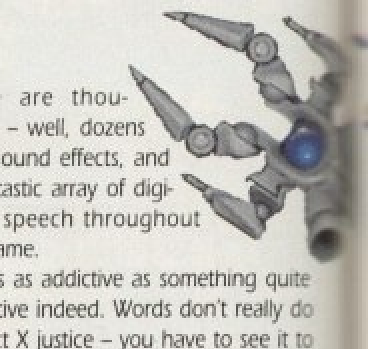
I don't really need to explain how to play the game – it's fairly obvious – but for the slightly dim I will explain – very briefly.

It's a six-level sideways scroller like R-Type. You control a ship and shoot waves of insects with your guns, which can be powered up by collecting pills. There you go, simple as pie.

Overall Project X is one of the finest, if not the finest shoot-'em-up available on the Amiga. It's got mouth-watering graphics, and except for the bonus stages, all the graphics are in 32 colours.

Sound-wise, your ears are going to take a real battering. It all kicks off with a brilliant rave tune, which pees all over the latest offerings from Oceanic and Altern 8. If you hate rave music then there is a unique "old timer" mode, where your ears will mellow out to some soothing flute music.

In the game there is no music, but there are thousands – well, dozens – of sound effects, and a fantastic array of digitised speech throughout the game.



It's as addictive as something quite addictive indeed. Words don't really do Project X justice – you have to see it to believe it. I suggest you run to the shops and buy it, and if you haven't got any money, steal it – in fact, get this game any way you can.

Project X is brill.

Jonathan

VISION

GGGGG

Absolutely brilliant graphics. It's console and arcade quality.

AUDIO

GGGGG

Mega rave tune at the beginning with good speech and sound FX in the game.

PLAYABILITY

GGGG

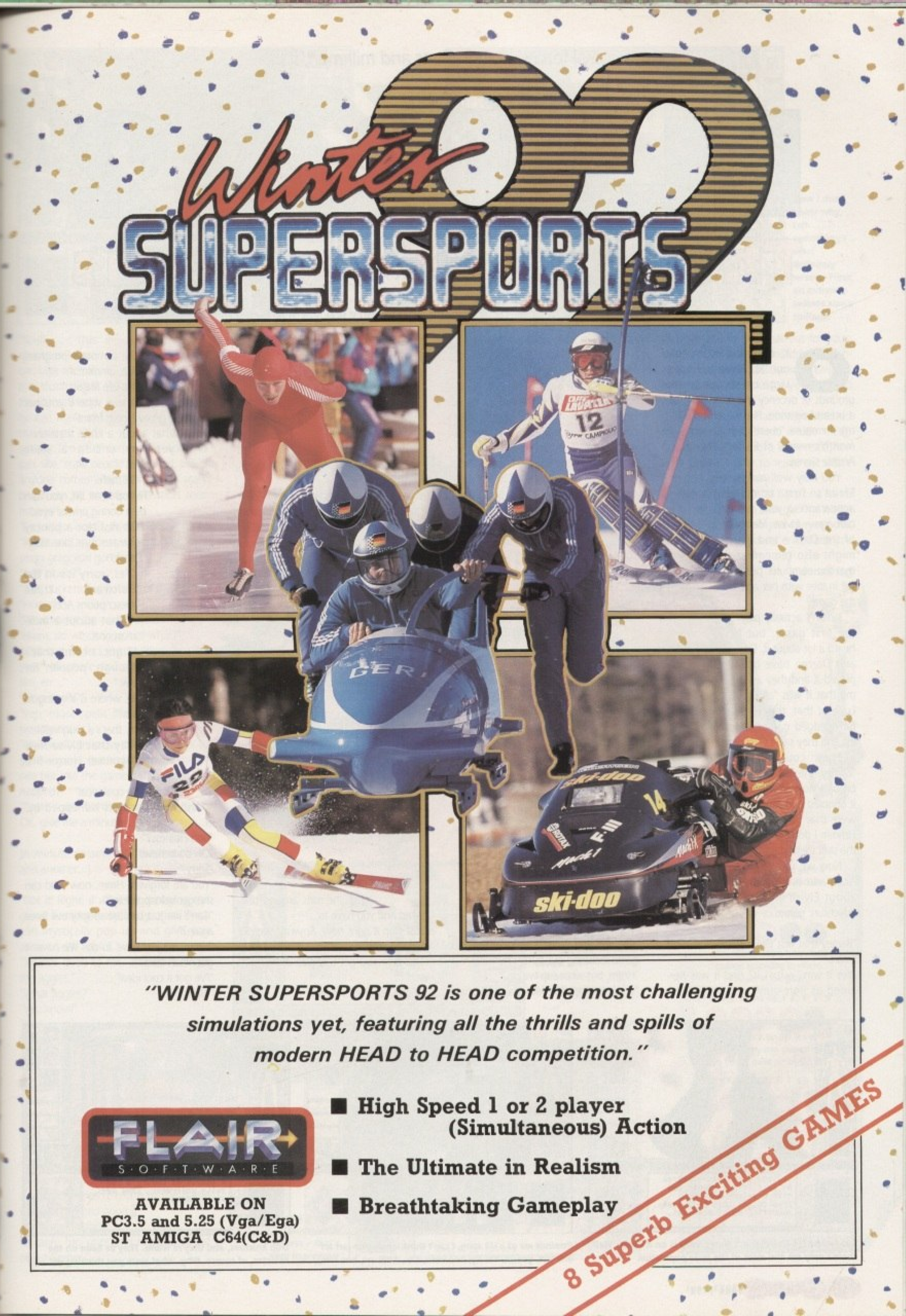
Project X is the only shoot-'em-up you'll ever want to play.

ADDICTION

GGGG

It's a fairly hard game, but there is a rookie mode for the weaker players out there.

93%


Winter
SUPERSPORTS 92
"WINTER SUPERSPORTS 92 is one of the most challenging simulations yet, featuring all the thrills and spills of modern HEAD to HEAD competition."
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8 Superb Exciting GAMES

Evil forces, mad Indians and milkmen, it's...

ELVIRA 2

The Jaws of Cerberus

ACCOLADE ▪ £34.99 ▪ 1 Meg ▪ Mouse ▪ Out now



OK, everyone knows that our lass Elvira has got a large chest, but on the grounds of decency this review will be a breast-free zone. Plus I used up all my immature "chest" puns in last month's review of Elvira – The Arcade Game.

You may well remember Elvira's first computer appearance a year and a half ago – Elvira: Mistress of the Dark – and you might also remember that the computer press fell in love with her and the game.

I didn't actually play the first game, but I heard a lot about it. Dan and Darren have both played it and they assure me that it was "all right". Look at that, they're both fully-fledged games reviewers and they say it's "all right".

They could have said: "Blimey, the first Elvira, that was a bit of a stonker, it oozed playability, it dribbled addiction, the gory graphics were that good I nearly wet myself." Hmmm I don't know, you just can't get the staff these days.

Now we go straight to two bods at Accolade having an in-depth chat about Elvira and her, er, amazing adventure games.

"Blimey that first Elvira game was a bit smart."

"Yes it was, wasn't it? And it was heralded as Role-playing Game of the Year."

"Was it?"

"Yes it was, you noggin."

"OK, tell you what – let's do another game featuring our busty chum."

"Hmm, but what can we do?"

"Well, perhaps we can do one where she runs around half-naked and you have to..."

"Just stop it right now. Anyway, we did that last time."

"This time you get a choice of being a, er..."

"Computer programmer?"

"Yea, smart one, a computer programmer, and what else, ummm..."

"Stuntman, just like Lee Majors."

"Brill! I don't know where you get these groovy ideas from!".

"What about a knife thrower – yes, my uncle's a knife thrower."

"Er, OK then."

"To top it all off, you can be a boring private eye."

"Oh no! Not a poncey private eye like Magnum."

"Yes, sorry it's in the Software Trade Descriptions Act."

"What about a milkman or a..."

"Right, I think that's enough people for now."

"OK, where is it going to be set?"

"Hmm, that's a toughie."

"Let's say that Elvira now owns a Hammer Horror film studio."

"Yesss, what a cool idea!"

"And, and she gets kidnapped by, er..."

"Bob Holness?"

"Oh do behave!"

"Sorry."

"You are forgiven. Hmm, now who can she get kidnapped by?"

"Can't we just use the spooky evil force again?"

"Hmm, it'll just have to do. We haven't got much time."

"I've got a cool idea!"

"What?"



Cor lumme it's Elvira! Don't worry, Help is on it's way. Well there's only me and most of the male population



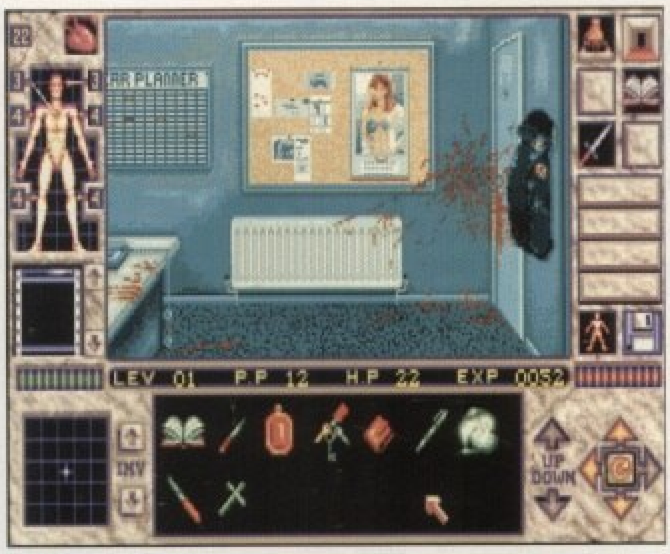
Reminds me of a U2 song, I can't think which one (arf arf arf, one, geddit, the fly, hee heee, one, I kill me, hoo hoo).



Ooh knickers, and they're warm. They've been on the radiator, of course. Why, what were you thinking of?



'Ere I don't fancy yours much, a bit on the skinny side for me



Now I don't know why, but something's most definitely wrong. Yikes, an extreme tomato sauce spillage!

"Well, this spooky evil force can take over all the studio and the film sets and he can make all the props and spooky film stuff come alive and this can, like, scare people away and, like, if anyone comes after Elvira these scary props can kill anyone who sticks their nose in!"
"I'm lost for words, that is bloody brill."
"Yeah and an ideal opportunity for a smart graphical gorefest."
"And blood?"
"Yea, buckets and buckets of the stuff!"
"Hooray!"
"What about the control system?"
"Hmm, do we change it or what?"
"Well sort of, let's just position the controls elsewhere and add a few extras like, err..."
"More spells?"
"Yep, more spells and loads of other twiddly bits."
"Now we both know that Elvira helps to sell the game, but how can we incorporate her into the game if she's been kidnapped?"
"Gosh, I didn't think about that. Right, OK, give me a minute ..."

(A minute passes, and then another, and another...)

"Got it! Right, if whoever is playing the game is doing really badly, then Elvira can mystically pop up and give you some cryptic advice."
"Sounds good to me, and don't forget the jiggles."
"What jiggles?"
"You know!"
"Oh yes, those jiggles, sorted."
"Bingo!"
"Marvellous, how do we do it?"
"One other thing though – what are we going to call it?"
"Elvira 2?"
"No, it hasn't got enough, you know, enough ummmfff."
"What about Elvira 2 – The Jaws of..."
"Death?"
"Nope that's far too naff, how about a word that doesn't relate to the game but sounds dead good."
"Hoffingglothzog?"
"Naaah, too unpronounceable. What about Cerber?"
"Hmm, I like it. Bit short though. Cerber, Cerber, Cerberus – yankee doodle dandy, I've got it! Cerberus!"
"Yessss, let's tell the others and get on with the game."

So, that's how games are made. It obviously requires a lot of time and skill.

Elvira 2 is kinda like Elvira 1 but, it's got slightly better graphics. The control system is the same, but it's got loads more spells and a completely useless motion tracker that tells you where your enemies are. I couldn't make it out, but maybe that's because I wasn't that interested in the motion tracker.

No, I had other things troubling my mind, like big beasties trying to eat me alive. That's in the game, of course, not in real life – well maybe Dan could be described as a big beastie, but I doubt if he really is one.

Overall, Elvira 2 is well worth buying. It's not as if I'm a press officer for Accolade, but just check this out...

Graphically it's a dream – everything is drawn well and you can work out what all the things are. The control system becomes second nature after only a few short minutes, thus making the game enjoyable to play.

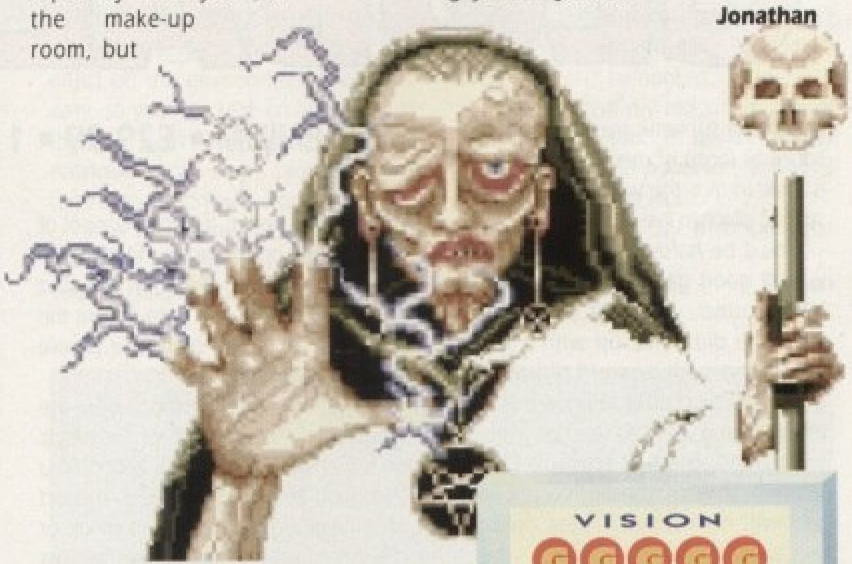
On the sound front, there are quite a few tunes and they change depending on where you are in the game – for example, when you are in the graveyard there is a really spooky tune which adds buckets of atmosphere to the game. You can easily lose yourself in a game like this – I found myself wandering around exploring and you know what? It's bloody great fun.

Speaking of fun, there's plenty to be had in this so-called "adventure" game, especially when you find the make-up room, but I'll leave you to find that out for yourselves. Oh, and a hard drive is definitely recommended because Elvira 2 has a lovely six disks for you to swap and change.

I don't know what really attracted me to the game (ahem, we do – Ed), but once inside there is no escape – well, until it's time to leave the office and go home, anyway.

Overall Elvira 2 is "all right", ha ha ha arf arf arf. Oh dear, Dan put that mallet down. Daz, why are you carrying that Black and Decker power drill? Can't you guys take a joke... ?

Jonathan





Ha ha! It's one of those naughty calendars. Here's May, but you should see September – £34.99 well spent



So you were in Dances with Wolves – that's very impressive

VISION

The graphics give the game a spooky atmosphere and are very well drawn.

AUDIO

Nice fear-inducing tunes that change according to where you are in the game.

PLAYABILITY

Corr lumme missus, it's as playable as, errr, something that's quite playable.

ADDICTION

You just can't stop yourself coming back for one more go.

90%

They're a morbid lot, these game designers. They always seem to come up with "bleak future" scenarios for their games. For instance, take the introductory story for Global Effect...

"Perhaps in the not-too-distant future, governments have advanced beyond those of today. Control of cities and civilisations is handled from central control points."

I don't know about you, but this summons up visions of computer-controlled systems with megalomaniacs operating them. "Big brother" policies towards the population is the common method of social control and any anti-government attitudes will be severely dealt with. Yes, very bleak indeed.

Mind you, it would seem pretty silly and inappropriate to have a story line that went something like this:

"Perhaps in the not-too-distant future, governments will abolish taxes and depravation along with homelessness and wars. Everyone must wear flowers in their hair and chant peace, love and happiness.

"Mary Whitehouse shall be appointed supreme overseer and censor of all forms of media and her word is final. In fact, the world will be a very spiffing place to live in indeed."





This is one of the many icons at your disposal. This particular selection allows unfriendly acts to rain forests

Are you worldly wise?

GLOBAL EFFECT

MILLENIUM ▪ £29.99 ▪ 1 meg ▪ Mouse ▪ Out now

You'd be hard-pressed to come up with a good game from this kind of background, wouldn't you? And if someone did come up with a game simulating such a world, I'd bet my entire collection of Mr Bean videos that that person would be French.

Anyhow, the first scenario is that which applies to Global Effect. It may be bleak, but it certainly does make for an interesting game.

In essence, Global Effect is very much in the vein of Sim City. You are a government leader, assigned control of either a new or existing world, depending on the options chosen at the start of the game. Your task is to ensure the continued survival of both your people and the environment.

You are given information about the status of your people and of the effects on the environment of any actions you take, such as clearing forests to expand your community or creation of oil or coal mines used to fuel power stations and so on.

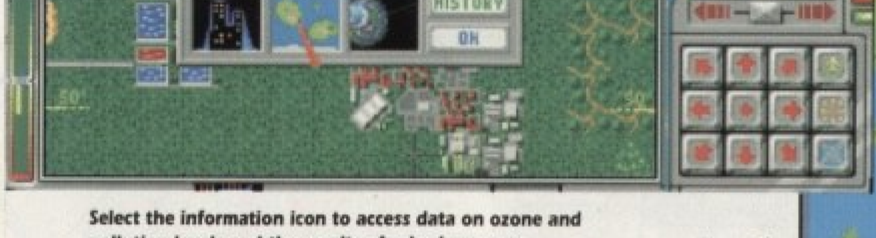
Depending on which scenario you chose at the start of the game, you may also have to contend with opposing parties who pose a threat to your own people.

In this situation, you have a number of military options to choose from. These include building control centres and early warning radars, as well as constructing air and naval bases with nuclear or conventional weaponry.

Of course, any nuclear conflict can also cause massive damage to the environment so this has to be taken into consideration before entering into a major battle.

As mentioned earlier, there are a number of options to choose from that will decide your role and goals within the game. For instance, you can assume control of an existing colony, where previous leaders have ever-so-slightly buggered up and it is your job to repair the damage. Alternatively, you can attempt a completely new command, starting on a world of your choice.

When playing the game, the screen display shows a portion of the map of the world which you are attempting, along with various command icons, message windows and status displays. You build your colony using a selection of icons which represent such objects as city blocks, power stations, water purification plants and even sewage

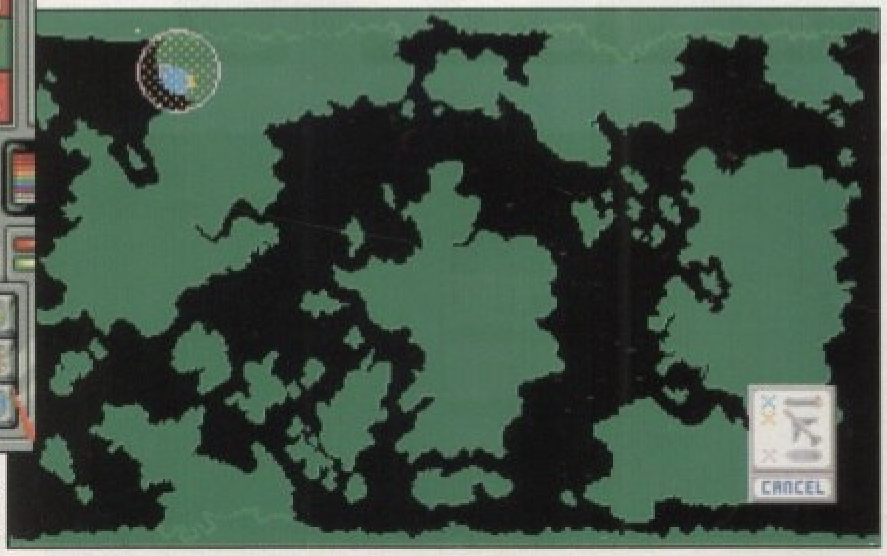


Select the information icon to access data on ozone and pollution levels and the results of seismic surveys



The entire world map. The black areas are populated regions





With the military icon selected, you can build up your war machine, complete with shore-line bases and airstrips

This map allows you to select the targets for destruction. The circle shows your radar coverage

VISION

Pretty good pics indeed.

AUDIO

Pretty average sounds indeed.

PLAYABILITY

Extremely playable indeed.

ADDICTION

Very addictive..erm....indeed.

91%

treatment farms! To be able to construct these objects, you need to have sufficient game power.

This is represented by a bar on the far left of the screen and increases if your colony and the environment have a good rating, or decreases if they have a poor rating. If game power gets to a low level, you may not be able to afford to build the required object.



One of the first objects on your list should be a power station. You have the choice of either oil-powered, coal-powered, solar-powered, wind-powered and ultimately, nuclear-powered stations.

Of course, these have differing effects on the environment which must be taken into account, but once a station is operational you can build power lines across the land to join up to city blocks.

When you build a city block, it will be dark, meaning there are no people in it. When you hook it up to the power station via the power lines, it comes to life. From there on, your city will begin to develop automatically as new city blocks begin to appear. You have to be careful not to let the development increase too quickly or you will find the game power will start to decrease.

As your colony grows, it will start to require basic services such as waste recycling and water supplies. Any deficiencies in these areas contribute to a poor colony rating. There are ways of controlling the colony and these involve building city limits to prevent expansion beyond a certain boundary, thus keeping the population to a reasonable size.

You can also use green belt boundaries instead of city limits. These are more environmentally friendly and will add to your environment rating.

To aid you in maintaining a balanced colony and environment, you have a number of information screens that help you decide what measures to take. Via the environment and economic data icon, you can receive information on such things as carbon dioxide levels, ozone layer levels and air pollution, to name a few.

There is also a seismic survey mode which allows you to search for natural resources for mining. You can view the entire world map here too. I enjoyed playing this game a lot. There's a fair amount to do, but not too much to make it overwhelming.

Of course, you are able to save your game should your omnipotent control of the people have to be postponed due to mum shouting 'dinner's ready'.

Sound effects are not abundant, but this doesn't detract from the game at all.

What makes Global Effect so good is that everything you do has a knock-on effect on the environment and economy, so you are kept on your toes all the time. Even natural disasters such as earthquakes can occur, causing unforeseen damage to your colony.

Once you master the wealth of control icons, the game is very playable. You may find it a little frustrating at first when you get messages about problems with your colony and you don't know why it's happening, but persevere and you'll be hooked.

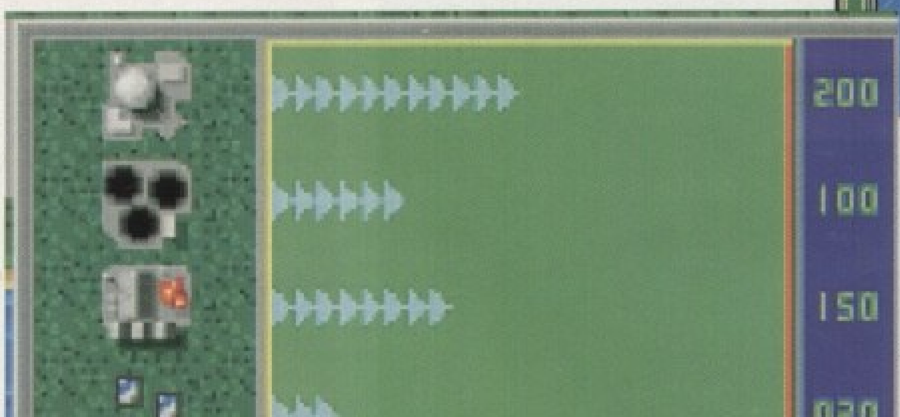
There is also my most favourite of features, the good ol' ability to play against a human opponent via serial link. Nice one, Millenium.

If you liked Sim City, then this is the game for you.

Darren



Natural disasters, such as Biffa... ooops, I mean earthquakes, are also something you have to beware of



Nothing is free and this screen reinforces that fact by showing just how flippin' expensive construction icons are



These are the four main icons allowing you to pause the game in cases of uncontrollable bodily functions

talking shop

ELSPA PENGUIN CHARTS • COMPILED BY GALLUP SPONSORED BY PENGUIN BISCUITS

This month		Last month	Title	Publisher	Price
1	▲	4	First Division Manager	Code Masters	£7.99
2	▲	26	Rainbow Islands	Hit Squad	£7.99
3	▼	1	Formula One Grand Prix	Microprose	£34.99
4	▼	2	F16 Combat Pilot	Action 16	£9.99
5	▲	NE	Project X	Team 17	£25.99
6	▼	5	Scooby Doo and Scrappy Doo	Hitec Software	£7.99
7	▼	3	James Pond	GBH	£7.99
8	▲	NE	Space Crusade	Gremlin	£25.99
9	▲	20	World Cricket	Zeppelin	£7.99
10	▲	NE	Black Crypt	Electronic Arts	£25.99
11	▼	8	Toyota Celica Rally	GBH	£7.99
12	▲	16	Operation Thunderbolt	Hit Squad	£7.99
13	▲	14	Wacky Races	Hitec Software	£7.99
14	▲	NE	Lotus Turbo Challenge	GBH	£9.99
15	▼	6	A320 Airbus	Thalion	£35.99
16	▼	15	New Zealand Story	Hit Squad	£7.99
17	▼	7	Jimmy White's Whirlwind Snooker	Virgin	£29.99
18	▲	NE	Special Forces	Microprose	£34.99
19	▲	23	Fantasy World Dizzy	Code Masters	£6.99
20	▼	11	WWF Wrestlemania	Ocean	£25.99
21	▲	NE	Harlequin	Gremlin	£25.99
22	▲	NE	Shadowlands	Domark	£29.99
23	▼	12	James Pond 2 - Robocod	Millennium	£25.99
24	▲	NE	Midnight Resistance	Hit Squad	£7.99
25	▼	13	Italia '90	Tronix	£9.99
26	▲	NE	Strider	Kixx	£7.99
27	▼	22	Ultimate Golf	GBH Gold	£9.99
28	▲	NE	Robocop	Hit Squad	£7.99
29	▲	NE	The Quest Of Agravain	Code Masters	£7.99
30	▲	NE	Golden Axe	Tronix	£9.99

Twelve new entries this month, six climbers and twelve fallers. There's a new number one – Code Masters' First Division Manager goes top of the league. Following behind that, Rainbow Islands leaps a massive 25 places to the number two spot.

The best news of the month is that Team 17 – the team behind the highly successful Alien Breed – have scored another chart success. Project X is a brand new entry at number five and hopefully it will continue to climb the chart.

Other notable new entries are Space Crusade by Gremlin, Black Crypt by Electronic Arts and Shadowlands by Domark. I predicted last month that Harlequin would enter the top 30 and guess what? Harlequin entered the chart at number 21. Ha! Who said all my psychic power had run out?

A big, big shock this month is the disappearance from the Top 30 of Populous 2, that great God game by Electronic Arts. And it was at number six at one point.

Budgets continue to dominate, with 19 games in the Top 30, but the full price game are beginning to make a healthy comeback.

It's time for next month's predictions. Dan has been quite sensible and gone for Project X, while because I'm a bit of a gambler I think I'll go for, err, umm Harlequin. It probably won't be number one, but to improve my chances I order you readers to run out to the shops and buy it, but sssh, don't tell Dan, I've got a tenner running on this bet...

Oh no, I'm running out of space. I wonder if I've got enough space to tell you about the chicken and the celery incident? Well, one day this...

Jonathan

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AMIGA BUDGET

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Adv Fruit Machine	6.99
Afterburner	6.99
Airbourne Ranger	7.99
Altered Beast	6.99
Arkanoid	5.00
Arkanoid II	6.99
Axel Magic Hammer	6.99
Baal	5.99
Barbarian II (Palace)	6.99
Batman Caped Crus	6.99
Batman the Movie	6.99
Battleships	7.99
Beach Volley	6.99
Bubble Bobble	6.99
Cabal	6.99
California Games	6.99
Carrier Command	7.99
Chuckie Egg 1	8.99
Chuckie Egg 2	8.99
Cloud Kingdom	6.99
Colossus Chess	7.99
Continental Circus	6.99
Crazy Cars	6.99
Daily Double Horse Racing	6.99
Daly Thomson Olympic Chal	6.99
Def of the Earth	6.99
Defender of the Crown	7.99
Dogs of War	6.99
Double Dragon	6.99
Dragon Ninja	6.99

TITLE	AMIGA
F.O.F.T.	6.99
Fantasy World Dizzy	5.99
Fast Food	6.99
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Football Manager	6.99
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Forgotten Worlds	6.99
Formula 1 Grand Prix	6.99
Gauntlet II	6.99
Ghost Busters 2	6.99
Ghouls & Ghosts	6.99
Gravity	6.99
Hard Drivin	6.99
Head Over Heels	6.99
Hitch Hikers Guide Galaxy	8.99
IK+	6.99
Int. Ice Hockey	6.99
Ivanhoe	6.99
JamesPond	6.99
Jockey Wilson Darts	6.99
Kid Gloves	5.99
Last Ninja II	6.99
Leather Goddess Phobos	8.99
Michael Jackson Moonwalker	6.99
Ninja Rabbits	5.99
North & South	6.99
New Zealand Story	6.99
Paperboy	6.99
Treasure Island Dizzy	4.99
Operation Thunderbolt	6.99
Operation Wolf	6.99
Outrun	6.99

TITLE	AMIGA
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Pacmania	7.99
Phantasy World Dizzy	6.99
Predator	6.99
R.A.C. Lombard Rally	6.99
Rambo 3	6.99
Red Heat	6.99
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R-Type	6.99
Rocket Ranger	8.99
Run The Gauntlet	6.99
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Shinobi	7.99
Shuffle Puck	6.99
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Starglider 2	6.99
Stuntcar Racer	7.99
Switchblade	6.99
Thunderblade	6.99
TV Sports (US) Football	7.99
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Wings of Fury	6.99
Wizball	6.99
Warhead	7.99
Xenon	7.99
Xenon 2	7.99

ATARI ST BUDGET

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3-D Pool	7.99
Adv Fruit Machine	6.99
Afterburner	6.99
Altered Beast	6.99
Airbourne Ranger	7.99
Arkanoid II	6.99
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Barbarian II (Palace)	6.99
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Deja Vu 2	6.99
Dogs of War	6.99
Double Dragon	6.99

TITLE	ST
Dragon Ninja	6.99
Elf	6.99
F.O.F.T.	6.99
Fantasy World Dizzy	5.99
Fast Food	6.99
Flood	8.99
Football Manager	6.99
Football Manager 2	7.99
Forgotten Worlds	6.99
Formula 1 Grand Prix	6.99
Gauntlet II	6.99
Ghost Busters 2	6.99
Ghouls & Ghosts	6.99
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Ivanhoe	6.99
James Pond	6.99
John Lowes Darts	6.99
Kid Gloves	5.99
Last Ninja II	6.99
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North & South	6.99
New Zealand Story	6.99
Ninja Rabbits	5.99
Paperboy	6.99
Treasure Island Dizzy	4.99
Operation Thunderbolt	6.99

Operation Wolf	6.99
TITLE	ST
Outrun	6.99
Pacland	7.99
Pacmania	7.99
Phantasy World Dizzy	6.99
Phoenix	6.99
Predator	6.99
R.A.C. Lombard Rally	6.99
Rambo 3	6.99
Red Heat	6.99
Resolution 101	6.99
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R-Type	6.99
Run The Gauntlet	6.99
Starglider 2	6.99
Sherman M4	6.99
Shinobi	7.99
Shuffle Puck	6.99
Silk Worm	6.99
Stuntcar Racer	7.99
Switchblade	6.99
Thunderblade	6.99
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Treasure Island Dizzy	4.99
Two-Bin	6.99
Untouchables	6.99
Vigilante	6.99
Waterloo	6.99
WC Leaderboard	6.99
Wings of Fury	6.99
Wizball	6.99
Xenon	7.99
Xenon 2	7.99

TOP TITLES

Title	Amiga	ST
4D BOXING	16.99	16.99
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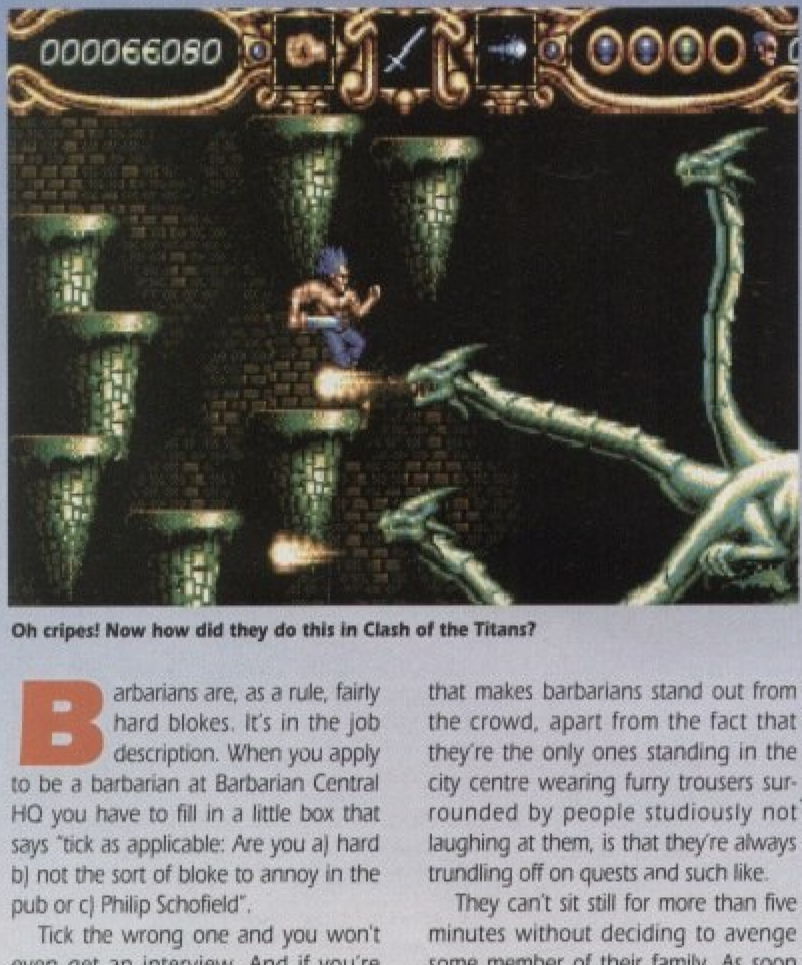
Slash and burn

MYTH

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Yowsers! This Listerine is powerful stuff!



Oh cripes! Now how did they do this in Clash of the Titans?



I don't know, these lads look a bit peaky to me

Barbarians are, as a rule, fairly hard blokes. It's in the job description. When you apply to be a barbarian at Barbarian Central HQ you have to fill in a little box that says "tick as applicable: Are you a) hard b) not the sort of bloke to annoy in the pub or c) Philip Schofield".

Tick the wrong one and you won't even get an interview. And if you're really unlucky, all the real barbarians find out where you live and beat you up every morning.

You can tell just how hard barbarians are because of their almost total disregard for normal clothing. Most of them just stomp around in furry long johns and leather sandals.

They might look stupid, but because of their near legendary hardness, nobody dares laugh at them. Not even Grant Mitchell from EastEnders. That's how hard barbarians are. Another thing that makes barbarians stand out from the crowd, apart from the fact that they're the only ones standing in the city centre wearing furry trousers surrounded by people studiously not laughing at them, is that they're always trundling off on quests and such like.

They can't sit still for more than five minutes without deciding to avenge some member of their family. As soon as the adverts come on in the middle of Coronation Street, they're leaping up, shouting things and shaking their fists angrily at the boiling skies and then legging it into the distance to chop peoples heads off. Yes they are a bit silly, but would you tell them? Thought not.

Our hero in Myth is one such barbarian. Feeling a bit stuck for something to do on a rainy Sunday afternoon, he decides to go and teach the evil god Dameron a thing or two. Up he gets, stretches his legs, finishes his cocoa, sets the video for Lovejoy and pops off down to Hell for level one.

Our hero must then battle through Hell, beating up skeletons and harpies, finding time to face Cerebus the legendary three-headed pooch who guards Hades, and also Big Nick himself. Yup, El Diablo, Beelzebub, the big red dude, puts in a rather startling guest appearance. Moving on through Greek mythology, you also find yourself crossing swords with Medusa, the Hydra, Achilles and his famous heel, and all manner of lesser baddies.

From there it's onwards to Norse mythology to battle goblins, giant dragons and Thor. Once you've plundered your way through that, a quick teleport takes you to Ancient Egypt to solve the riddle of the pyramids and negotiate



Our hero doesn't like people hanging around him (arf arf arf)



Typical. You play one Black Sabbath album backwards and look what happens...



Lose weight the Myth way



"And this is my favourite little blue number" chuckled Mr. Myth



The spooky fiery haircut claims yet another victim



Mr Myth half-inches an antique serving tray. Call in Lovejoy!

loads of spooky traps. That done, you can zoom into an action-packed final encounter with Dameron in a weird and wonderful metaphysical shoot-'em-up on the boundaries of existence. Or something like that.

Well, it all sounds fairly simple, doesn't it? Just a couple of different platform beat-'em-up levels to plough through. Wrong! Although at first glance Myth looks like your usual leap and slash game, there's a lot of puzzling going on in there.

A good working knowledge of mythology will make things more obvious, but even then a smidgen of brainpower will be needed to figure out how to defeat the various legendary beasts. Cerebus, for instance, can only be killed with a special trident. Where can you get this fabled trident? Well, you can only get it from a demon. How do you make the demon rise up from the pits of Hell? How do you kill it when it does appear?

Aha! That would be telling. You get the picture. Each big baddie requires some magic weapon to kill it, and to get the magic weapons, you'll have to put your grey matter into gear.

And not only is Myth blessed with deeper gameplay than other games of this ilk, it's also the proud possessor of some of the tastiest graphics and sound ever to thunder onto the Amiga. The bit when Satan looms up out of the flames with a spine-chilling laugh is absolutely gob-smacking.

And there's no disk accessing before he pops up either, so you can't guess he's coming. None of your "oh look the games frozen while the computer loads in the big baddie graphics" here.

All the sprites are loaded at the start of the level, so each big baddie pops up completely out of the blue, causing many shrieks and squeals from little kiddies.

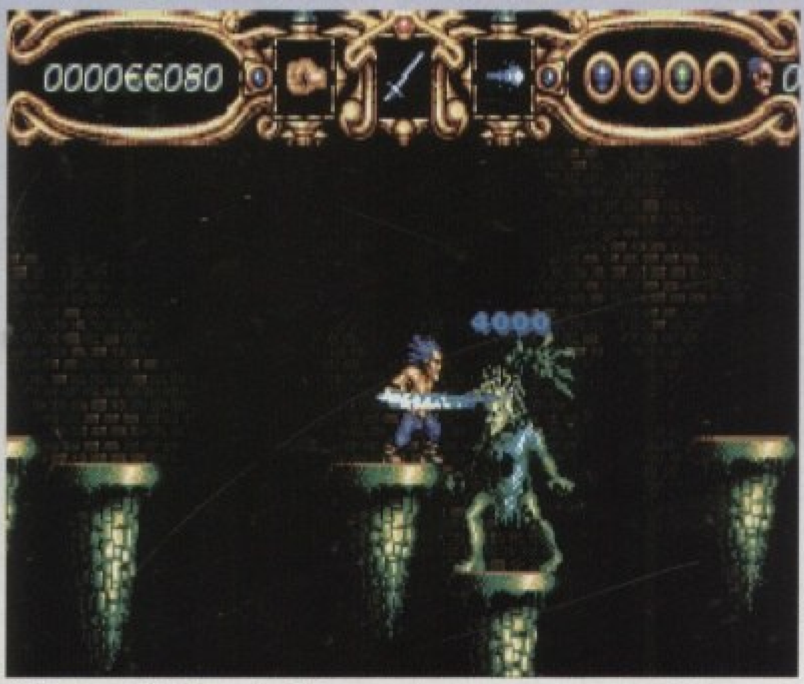
Sound is excellent as well, and it often plays an integral part in the game. As well as the eerie howls and crackling flames of Hell (which get louder as you get deeper), you also get a strange woman who beckons you forward, and then tells you to stop, then beckons you on again.

If you fail her bizarre game of musical statues, she transforms into a gargoyle and kills you, but get it right and she'll give you a pressie.

The digitised speech is crisp and clear, but you'll have to pay attention as the slightest foot wrong results in much blood spillage.

I have to admit that I was a bit dubious at all the superlatives being heaped upon this game, as early demo versions were a bit simplistic. But it's come on leaps and bounds since then and is one of the best arcade adventures around. For once, a game that's worth all the hype that surrounds it. Buy it, or forever be giggled at by small children in the street.

Daniel



A little more off the top, madam?



Who're you looking at? Eh? Wanna step outside? Eh? Under the fighting tree, right now!

VISION

GGGGG

Big, smooth, colourful, shiny, lightly roasted sprites with a heavy gorgeousness overdose.

AUDIO

GGGGG

Oozing atmosphere out of the speakers and all over the carpet.

PLAYABILITY

GGGGG

The puzzle element keeps things that little bit different. A trend-setter for sure.

ADDICTION

GGGG

You'll be hooked, but a game this size would benefit from a password system.

94%

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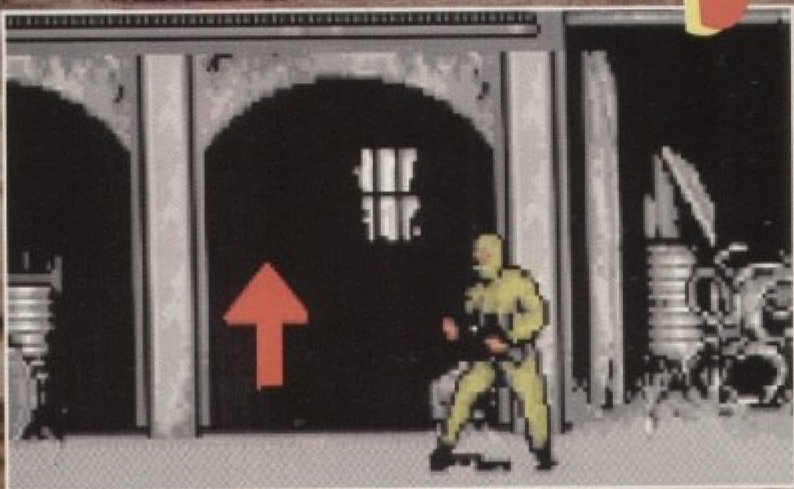
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cheat mode

Having trou
your way aro

Then let Daniel Whitehea



Hide in the left-hand side of this alcove for an extra life

The running around bits...

These are basically the same throughout the game, so I'll keep this bit brief. It's important that you get some extra weapons as soon as possible to beef up your arsenal.

If you're playing in two-player mode, try and get on either side of an enemy and knife him from both sides. This should kill him nice and quickly.

The two most important weapons are the rifle and the grenades. The rifle is the best weapon for seeing off the guards, and the grenades take care of the men with flame-throwers quite nicely.

Be on the look out for extra lives. You pick them up by hiding in the scenery, and if you find one you'll hear a little ping and a "1UP" icon will float away.

On the first section, there are two bonus lives quite near the end. Have a peep at the piccies to see exactly where. This should give you a healthy stock of lives to get you through the next few levels. My advice is to keep hiding in every nook and cranny as you go along, until you find the extra lives.



Duck behind this wall for another extra life

There are some other tricky bits to look out for. The dog on the second scrolling section cannot be killed, even with grenades, so just hide in the scenery until he's run past. Also be on the look-out for the snipers in the background.

Like the dog, they can't be killed, so here's what to do. Shuffle out into his line of fire, and just before he shoots at you, roll back into cover. Now quickly run past him. With practice, this should get you past him with no trouble at all.

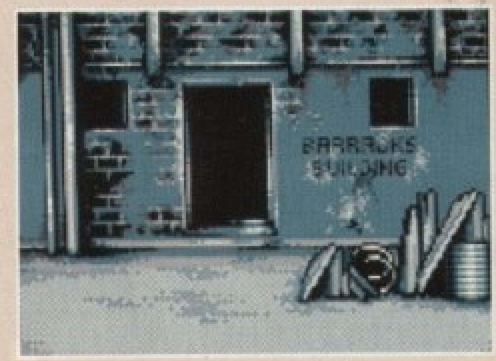


As soon as you start, get the rifle and some grenades

The Barracks

The first building you reach will be the Barracks, and it leads into the first 3D section. Your task here is to find some important documents which will prove Miguel Tardiez's guilt and all-round fiendishness.

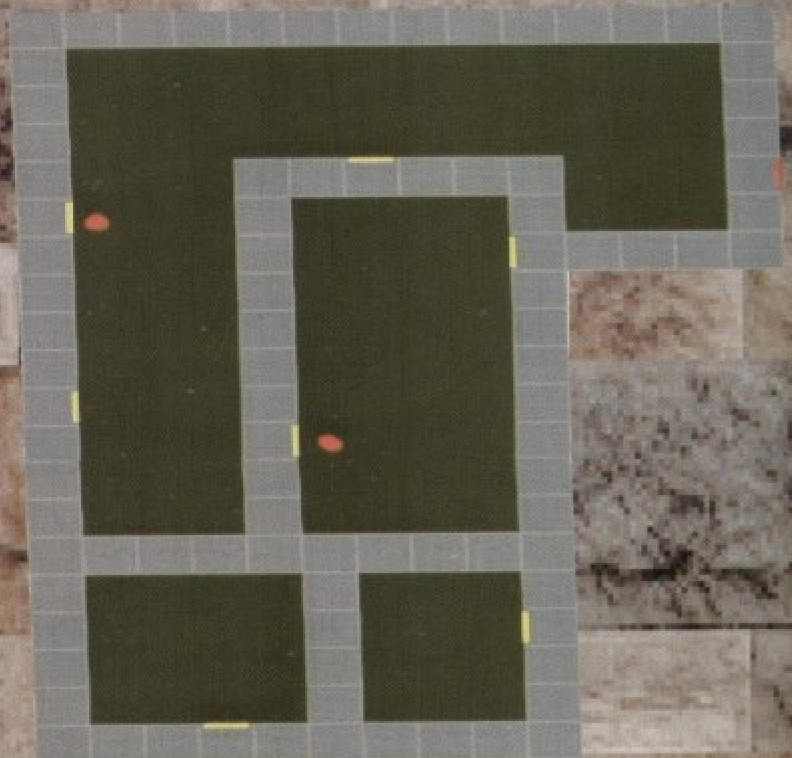
The two most probable locations for the suitcase containing the documents are marked on the map with a red spot. Enter the room, and shoot the guard inside. If the documents are there you'll see a little suitcase flash. Leave the room and you'll have the documents in your sweaty paws.



Remember that the guards always patrol in a set pattern, and will tend to go round and round the same block. Keep your eye on the little map at the bottom of the screen to see where they go, and then lie in wait for them.

This applies to all the 3D bits, so get used to aiming and firing your gun before they guards spot and shoot you.

The best tactics here are for one player to go and get the documents, while the other takes care of the guards. If you're playing alone, then just go for the documents and try to avoid the guards. Once you've got the suitcase, head out of the exit and into the second scrolly bit.

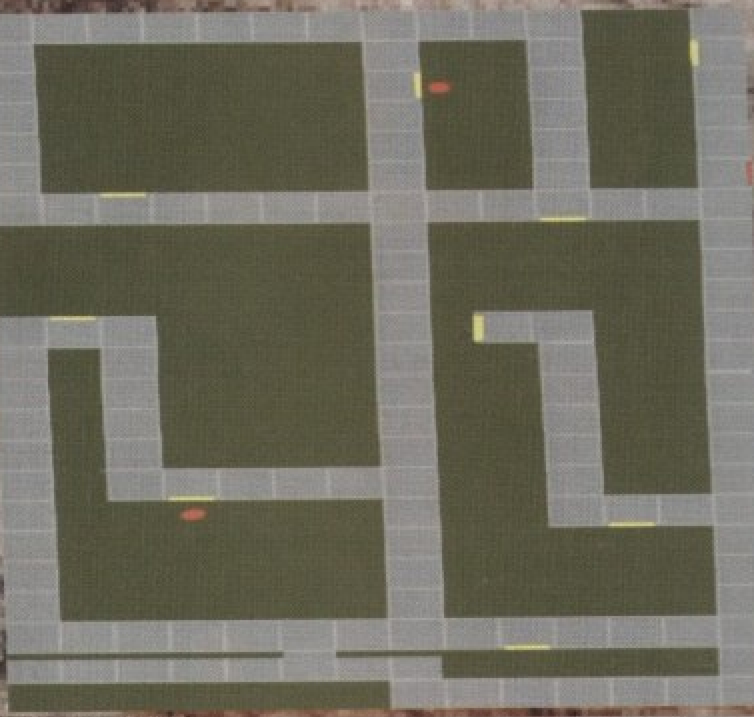


The Barracks

...uble finding ...ound Alcatraz?

cheat mode

...ead ...ow you the sights...



The Industry Building

The Industry Building

OK, you've reached your second objective. This time you must find and destroy Tardiez's drug supply and his stocks of filthy drug money (spit).

Again, the rooms you should be heading for are marked with a dinky little red spot. Be careful, as the guards will be patrolling those areas very heavily.

If playing with two players, then it's obviously better if you handle one room each, whereas single players are going to have to be very cautious.

To destroy the stocks, simply enter the room. There won't be any guards inside. Now press Fire and you'll chuck a bomb into the room.

Pop outside again. A couple of seconds later you'll hear a nice big boom, and your job is done. With both targets eliminated, head for the exit and get ready for some more scrolly stuff.

The final comedown

You're almost there now, with just the last mad dash to the helicopter to go. This scrolly bit is fairly short, but there is a rather fiendish explosive hidden in the scenery.

If you're not careful you could be killed, so try and make sure you've got enough lives left to compensate.

Once you see the chopper, run to it and you'll take off. All you have to do now is stop off on the Cellhouse roof to pick up Miguel. He'll probably have tried to escape so run after him and he'll come hopping back. Leap back into the helicopter, and fly off into the sunset for your mission analysis. Easy!



Get Tardiez into the chopper and you've done it!

The Cellhouse

To get to this bit, you'll have to do a bit of climbing (the doorways are blocked, y'see). Simply stand in front of the building, push up and fire to start climbing up the side.

Make sure you do it when there are no guards nearby or you will probably be killed while you stand about swinging your grapple hook.



The actual climbing bit couldn't be easier. Just waggle the joystick to climb, but remember to avoid the searchlights. Once you reach the top, you're in!

The actual cellhouse itself is the hardest 3D section of all. Not surprising when you realise that this time your target is Miguel Tardiez, Mr Big Drug Baron himself!

Expect loads of guards, and watch out for them sneaking up from behind! It's best to split up for this bit as you've got a lot of rooms to search.

You see, Miguel is hiding in one of the cells. Unfortunately, there are oodles of them to look through and his location appears to be different in every game.

The best way of finding him is to start at the bottom of a corridor, move forward one step, then turn left and enter the cell, go out, turn round, and go into the other cell, come out, move forward again, and so on.

It'll take a while so it's safest if you kill all the patrolling guards before you start your search.

When you find Tardiez, he'll be lurking behind the scenery somewhere, but you'll know he's there 'cos there'll be a bodyguard in the cell.

Waste the bodyguard and out comes Miguel with his hands up. Leave the cell and he comes with you, in handcuffs. Go out of the exit and you'll leave Miguel tied up on the roof.

Now you'll have to abseil down again. To do this, press Fire to slip down the wall and Fire to stop again. Don't slip too far or you'll die, and keep a look-out for the searchlights again.



The Cellhouse

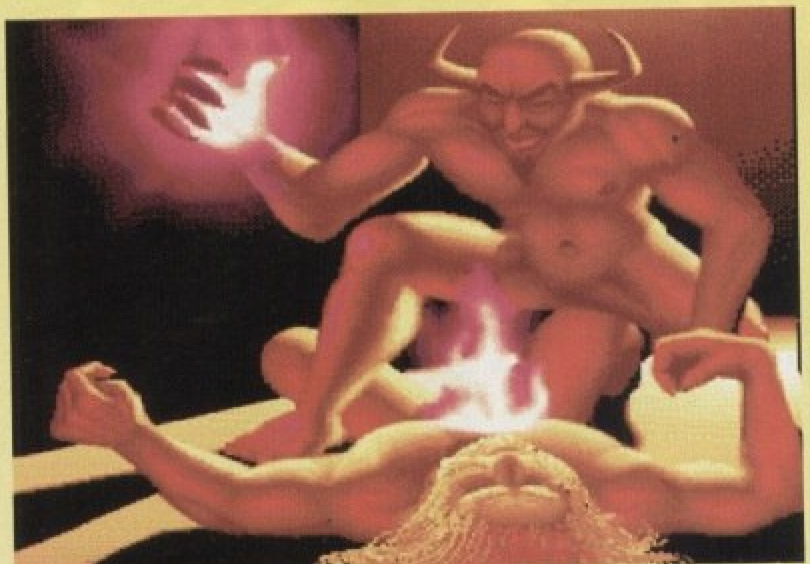


GAMER GOLD

Stormlord's back, and this time he's brought a pizza

DELIVERANCE

21st CENTURY ENTERTAINMENT ▪ £25.99 ▪ 1 meg ▪ Joystick ▪ Out now



As Stormlord breathes his last, one of the demons shows off his glowing hand party piece.



Stormlord just manages to dodge a good thumping



'Ere, clear out of it. A spooky satanic vandal flees from the scene of his crime



"And have you got it insured?" So says Hugh Scully as he pops up to value this rather nice wardrobe

Hands up who used to have a Spectrum. What a quaint little rubber beer-mat it was. And some of the games were quite nippy indeed, despite what the C64 snobs will tell you.

Some of the greatest games on the Speccy came from the almost criminally talented hands of Raf Cecco. He specialised in shoot-'em-ups with gallons of colour and explosive sound. On the Spectrum, as well. Blimey.

Exolon, Cybernoid, Cybernoid 2 and Stormlord were his biggest hits, and quite rightly too. Never had the poor old Sinclair witnessed such excitement. It was the closest thing to a "proper" game that us humble Spec-chums ever got.

What, I hear you say, has this got to do with Deliverance? Well, for those who haven't guessed, Deliverance is Stormlord, beefed up and rewritten in full colour Amigavision. Smashing.

You take on the role of the now obligatory Barbarian, and you have to free a previously peaceful land from Satan and his totally bogus posse.

Satan, or Stan to his mates, has kidnapped all the fairies. So not only has the world been plunged into darkness and damnation, but nobody can do the washing up. So, up steps brave old Stormlord, and trundles off to pick up fairies (insert any old John Inman joke here).

So, coincidence or what? No sooner have I calmed down and stopped palpitating over Myth, when up pop 21st Century Entertainment with Deliverance. It's uncanny. Two games in the same month, and they're very, very similar.

As in Myth, Deliverance requires you to don furry boots and a shaggy hairstyle and chop your way through Hell to sort out some fiendish demonic bloke. And when you reach the big baddie dude, you move from platform hack n' slash to fast moving shoot-'em-up action. Spooky, eh?

So, the obvious comparisons. Is Deliverance as good as Myth? Well, not quite. It's neck and neck on the graphics and sound front, but Myth's bigger and slightly more challenging.

Is Deliverance as good as Gods? Yes, in fact it's tons better. The initial look is the same, but Deliverance doesn't bog itself down with fancy AI routines for the baddies. In fact, it's sheer bad luck that Myth and Deliverance have come out at the same time. Had Deliverance come out last month, things might have been different, but sometimes life can be so cruel.

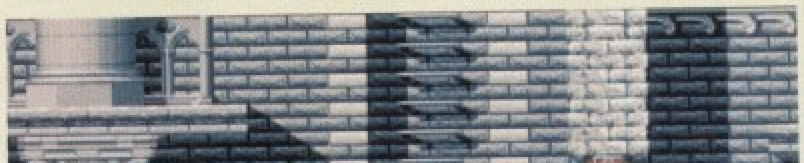
You see, Deliverance has got absolutely exquisite graphics. Yes, that's what they are. Exquisite. And the sound is nice and chunky. But, unfortunately, Myth's got both of those as well and it's got a puzzly element to it, which just gives it the edge.

That's not to say that Deliverance is a loser. No, no. Nobody goes home empty-handed on this show, and Deliverance wins our "Excellent Platform Slash-'Em-Up But Not Quite As Good As Myth" award.

Oh, I feel so guilty about this. You can't believe the personal anguish this is causing me. Under normal circumstances, I'd love this game. In a really deep and meaningful way. We'd have candlelit dinners, walks on the beach, romantic weekends in the Peak District, a lovely wedding and some kids, and then settle down for a long and happy life together.

Unfortunately, Myth came along first and stole my heart away. I'll still carry a torch for Deliverance though, it'll always be special to me. Oh, my heart is breaking. I'm sorry Deliverance, you came along too late. Maybe if fate had smiled on us, we could have made beautiful music together. But if you don't fancy Myth, then by all means give this a look. It could be the start of a beautiful friendship...

Daniel



Our hero is so hard, he can blow monsters down with just one breath

VISION
GGGGG
Take a look and see. Brings a tear to the eye, doesn't it?

AUDIO
GGGGG
The clangs, the booms and every noise in between.

PLAYABILITY
GGGGG
Oh God. 5 out of 5 again. It's so painful...

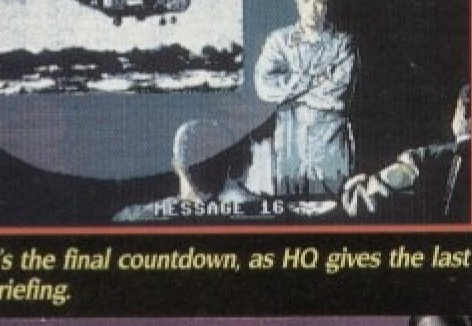
ADDICTION
GGGG
...But, it's a bit easy and Myth is better. So there.

92%

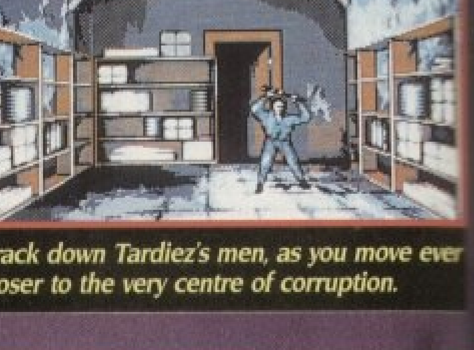
ALCATRAZ

The island of Alcatraz stands empty and discarded - a relic of the past. But, as night settles, the ruins of the old prison comes to life. In an ironic twist of fate, Alcatraz is now the hide out of an evil drugs cartel, led by Miguel Tardiez, its cruel and callous chief. As a crack commando you are about to undertake the most perilous and daring mission ever. Your task - penetrate the island of Alcatraz and capture Tardiez. If you fail the State Department will simply deny any knowledge of your existence. There's no such thing as a dead hero.

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It's the final countdown, as HQ gives the last briefing.

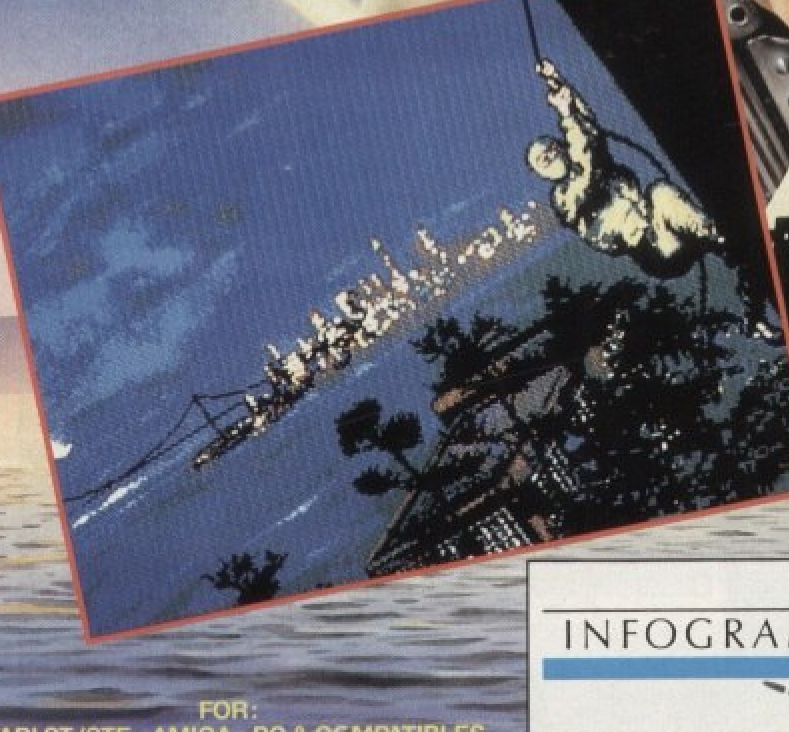

Track down Tardiez's men, as you move ever closer to the very centre of corruption.



Prepare with care, a simple mistake will cost you your life.




One false move and your cover is blown.




Tardiez's men lurk on every corner.

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After the wall...

The Berlin Amiga 92 show – small, but perfectly formed



The large, if visually constipated frontage of AMK hall 1.


Some of the many Betacam SP setups littering the Berlin show


Supra's FaxModem running with an A600HD

In a capital city still sporting the obvious scars of decades of destruction and forced segregation, whose two peoples retain enough of the siege mentality to view each other with suspicion and sometimes even mild hostility, the notion of holding a jolly little Amiga show might seem a bit strange.

The Berlin Amiga 92 Show, however, was united and vibrant enough to throw up some interesting new releases and not a few insights on the European and German Amiga scenes.

The German TV market is dominated by small and medium-sized cable and satellite stations, many of whom use Amigas for their stock-in-trade production graphics. It was hardly surprising, therefore, to find a show and a marketplace given over mostly to the Amiga's role as a video workstation.

The number of stands exhibiting the machine side by side with professional Betacam SP video editors would alone have supported this impression had it not been for the proliferation of genlocks, DCTVs, and AVideo cards being put through their paces at the same time.

New products recently released or previewed at the show included the Supra FaxModem, Rainbow II 24-bit graphics card (selling for the equivalent of £595), Commodore's A600HD, the Golem TurboCard 68030 accelerator for A500s (first to fit in the external bus), Vortex's AT386SX emulator board, Checkmate Digital's Hi-Q tower system (vying with Golem's tower for the Tallest-Amiga-at-the-Show award), CanDo v1.6, and a host of products of newer and older origin.

One very interesting low-cost accelerator released at the show was the Hardital Big Bang and its bigger brother, Super Big Bang. The former is a 25MHz/25MHz 68030 with 2Mb RAM selling for DM1,090 (about £385), the latter being a combo-type card with SCSI-2 controller at DM1,340 (£471).

Price war

At these prices, such cards could clean up the UK accelerator market overnight, and if the 68040/4Mb version is released, as a Hardital spokesman suggested it might, for less than £1,000, we could see the most beneficial high-power price war ever. Not for nothing have Hardital christened the card "Over the Top".

We had to be helped off the floor when we strayed in front of a stand selling the A3000/25 complete with 52Mb hard drive for £1,100, and when we later learned the price had fallen to £900 it was off to the bar to cry into *zwei gross biers* in lament for the poor overcharged British consumer.

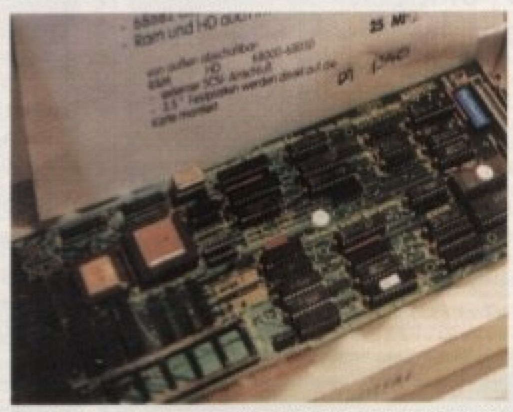
Similar throat-cutting was in evidence as A500 Plus prices fell towards the £200 mark and DCTVs started a run on the £250 barrier, so much so that *zwei more gross biers* were needed to calm us down. Thank God we'd left our credit cards at home.

As a companion to all this hardware, the software side was relatively muted, with Imagine v2.0 and Caligari Broadcast hogging most of the limelight on the videography stands.

From the demonstration tapes splattered across numerous monitors, it was fairly clear that a large proportion of the average German TV viewer's day is spent watching Amiga generated images from the Caligari or Imagine duo.

Adept Development were showing their Painter 3D package and TVPaint was making its ominous début on the AVideo board, but neither seems as yet to have made the impact of the big two, and Real 3D was surprisingly nowhere to be seen.

Both the main contenders directly support DCTV which was selling by the Volkswagen load, so the boom towards home 24-bit video production seems well and truly on in Europe.


Hardital's range of accelerators could be a price sensation

In true never-say-die fashion, the A1000 made a spirited appearance in the shape of the Phoenix Ressurection board *(sic)*, a complete motherboard replacement designed to give the oldest Amiga the same specifications as the latest models.

The board comes complete with ECS, 2Mb RAM, internal SCSI optional fitting, a co-processor socket, and Kickstart ROM sharer. The A500 and A2000 were, of course, the best supported machines in terms of peripherals, but it speaks well of the German market that A500 add-ons did not totally engulf the others as is so often the case at A500-dominated British shows.

Bargain hunters were happily walking off with A2000 52Mb Quantum hard cards for as little as £280, and the number of beaming customers we saw clutching what would in Britain be rare purchases, such as 24-bit boards and accelerator cards, was out-weirded only by the sight of hungry punters demolishing what looked suspiciously like oily feather bolsters stuck between two mattresses dipped in bread crumbs, but which on closer inspection turned out to be aggressively proportioned sausage sandwiches.

Spurned

Subdued to begin with, busy towards the end, and spurned by Commodore, Amiga Berlin shouldn't have been a success.

That it managed in the space of what would be a normal-sized British show to display more high-end equipment than you might see in a year in London is a testament both to the higher purchasing power enjoyed by German consumers and the more developed nature of the Amiga market in central Europe.

The British market will no doubt develop this year in the video direction as DCTV and AVideo eat into the low-end video market to complement Harlequin and company at the upper reaches of 24-bit quality.

Whether it will do so fast enough is hard to tell, but one thing is clear – falling prices are inevitable.

Commodore UK will continue to recommend that the Amiga be sold at its own retail price, but if enough of the larger retailers take advantage of the cheap machines appearing on the continent, Commodore could be chopped off at the knees and the high street forced to exert pressure if they are to avoid losing vast swathes of sales to mail order.

On the other hand, this prediction could be as accurate as the BBC's exit poll, so we'll just have to wait and see, won't we? AC

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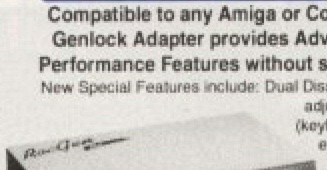
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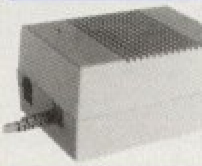
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Will Andrew Lloyd-Webber pay £10 million for any of these efforts? Who knows?

Well it looks as though you Amiga artists have been working overtime because we've received a whole ton of art disks this month.

First up is Nadir Ricky. Nadir sent in quite a few pictures, but the one which stood out from the rest was a picture of the Silver Surfer.

Nadir used the colours very well considering that The Silver Surfer is meant to be all silver. The picture was created using Deluxe Paint 3.

Hooray, at last a woman artist! Alison Shiel from Washington in Tyne and Wear sent in a couple of horror pictures.

One was a reproduction of The Lost Boys video cover and the other was an original drawing entitled Vampire Hotel. We preferred Alison's picture of the Vampires with the multi-coloured lips to the picture of The Lost Boys.

It just goes to show that there are some women out there who own Amigas, so if any other females are reading this, hopefully Alison's picture will inspire you a bit.

The picture that raised the most smiles in the *AC* office was Millie Tant from Viz.

Millie was sketched by a chap called Peter Guest who lives in Swindon.

You can see that the background is digitised and you've probably read in the magazine that digitised stuff won't get a place in the Gallery. Well, we don't mind digitised pictures as long as they are creative and there is some originality in there, but hand-drawn stuff will always be better than scanned or digitised efforts.

Nineteen-year-old Darryl Blackwell from Cheltenham gets his work shown to the nation this month, too. He sent in a disk full of excellent pictures, but because of space, we chose two which we thought were the best.

His picture entitled E.F.A. is of the Eurofighter Test Aeroplane. The use of colour here is quite fantastic – the sky looks good, the planes look good, and you know what? Put them together and you get a damn fine picture.

His other picture is of a Mazda NSX – again, colour has been used to good effect. Both took around five hours to complete.

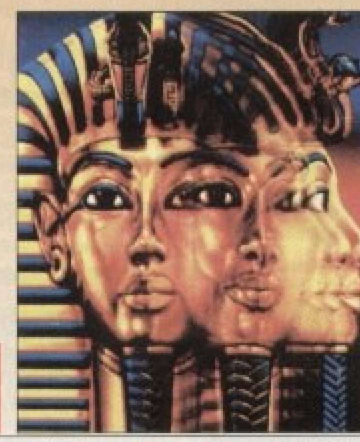
This might be the last time I'm going to print a picture of an aeroplane or a car because quite frankly these subjects are getting slightly boring.

Come on you Amiga artists – let's have a bit of originality. Unless you feel your pictures are exceptionally good, no more planes, no more cars, and definitely no more tanks – please!

The winning picture is, in fact, a landscape, and the man responsible is Phillip Plunkett from Ireland. It's very detailed and is a worthy winner – definitely one of the best landscapes we've had in the Gallery for a long time. This is the sort of artwork we want to see more of. Well done Phillip.

the Gallery

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SILVER SURFER, **by Nadir Ricky**



VAMPIRE HOTEL, **by Alison Shiel**

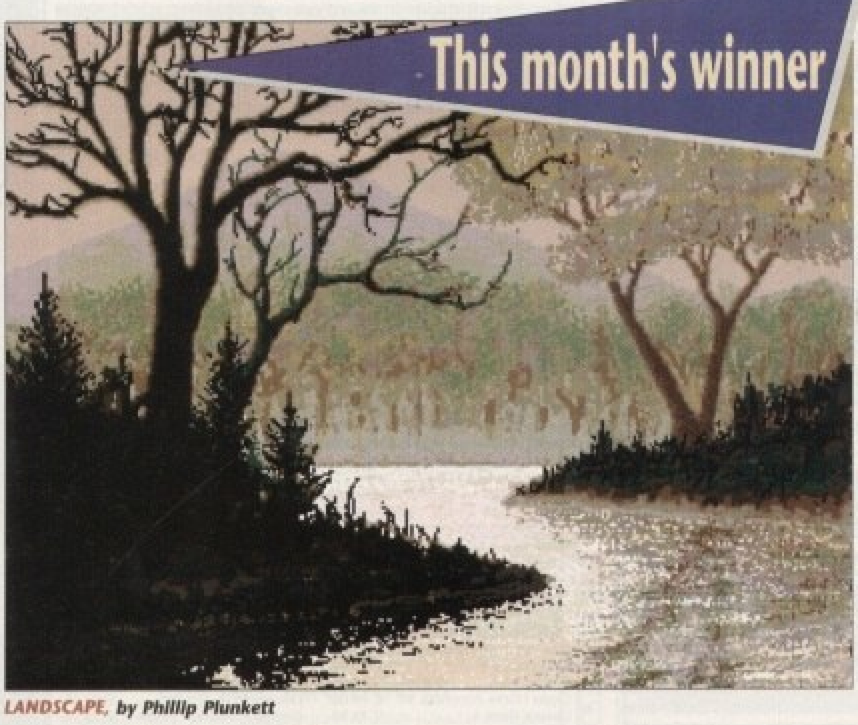


E.F.A., **by Darryl Blackwell**



MILITANT, **by Peter Guest**

This month's winner



LANDSCAPE, **by Phillip Plunkett**

Calling all artists!

Think you can do better than these brilliant efforts? Well get mouse to mat and send your pixelated piccies in to us at:

The Universe's Best Amiga Gallery, Amiga Computing, Europress Publications, Europa House, Adlington Park, Macclesfield SK10 4NP

Remember to supply your name and address and the format and names of the pictures on the disk. If you want to, you can also send in a note to say how you created the pictures, how long they took, which package you used, and so on. Good Luck!



MAZDA NSX, **by Darryl Blackwell**

RICOH PCL5 LASER PRINTER

Ricoh UK Ltd is part of the worldwide Ricoh Group of companies, originally established in Japan, in 1936. With a turnover of over $5 billion and 37,000 plus employees, Ricoh has been producing computers and peripherals since 1971. They are renowned in the industry as pioneers in the field of Office Automation Equipment and have won many awards for outstanding industrial design. Ricoh have employed all their expertise to produce a 'first' in laser printers for the worldwide market, the LP1200 with FLASH ROM.

Fully HP LaserJet III™ compatible, the new LP1200 laser printer employs industry proven laser technology. Unlike LED page printers, which use light emitting diodes, the LP1200's laser lightsource, focussed by high quality lenses, is able to produce the most accurate and intense printed images. It has 2Mb of RAM built-in and requires no additional RAM to print a full A4 page of graphics. Its fast, efficient processor and engine, together with straight paper path design, allows printing at a full 6 pages per minute. Unlike its competitors, this advanced laser engine enables the LP1200 to address a range of print resolutions up to 400dpi. A printer driver is scheduled for release in late April, to enable the Ricoh LP1200 to print at 400dpi from Windows 3.

Again, unlike the competition, the LP1200 includes a powerful document description language as standard. This language, 'LAYOUT', offers unique opportunities to develop custom-made printing systems. In particular, forms and document templates can be designed and stored electronically in the LP1200's unique FLASH ROM, alleviating the need for pre-printed forms!



The Ricoh LP1200 is a genuine laser printer and not an LED printer. Make sure you check out the competition!

See how the Ricoh LP1200 compares to its Laser Printer Competitors

FEATURES	EPSON EPL4100	HP LASERJET IIIP	MANNESMAN TALLY MT904+	RICOH LP1200
Average Street Price (*expected)	£569	£699	£699*	£699
Official RRP	£945	£1,179	£1,099	£1,195
Maximum resolution in dots per inch	300x300	300x300	300x300	400x400
Windows 3 Driver @ 400 dpi (April)	-	-	-	YES
Print Speed	6ppm	4ppm	4ppm	6ppm
Straight Paper Path	YES	-	-	YES
PCL 5 Printer Command Language	-	YES	YES	YES
HP-GL/2 Vector Graphics included	-	YES	YES	YES
Resolution Improvement/Enhancement	YES	YES	YES	YES
Full A4/300 dpi graphics with standard RAM	-	-	-	YES
Warm Up Time	<45 secs	<60 secs	60 secs	45 secs
First Page of Text Output	<20 secs	<40 secs	34 secs	<15 secs
Document Description Language included	-	-	-	YES
Flash ROM	-	-	-	YES
Upgradable Firmware	-	-	-	YES
IC Card Slot	YES	-	-	YES
Scalable Resident Fonts - in HP LJ III Emulation	-	8	8	8
Resident Bit-Mapped Fonts	11	14	14	14
AGFA Intellifont Scalable Font Technology	-	YES	-	YES
HP LaserJet III Emulation Included	-	YES	YES	YES
EPSON FX Emulation Included	YES	-	YES	YES
IBM ProPrinter Emulation Included	-	-	YES	YES
Standard Tray Capacity	100	70	100	100
Protective cover on standard tray	YES	-	YES	YES
Cost per copy*	1.65p	2.00p	1.71p	1.65p
Min-Max Paper Weight in gsm	60-157	60-105	60-120	60-157
Able to print on OHP Film	YES	YES	YES	YES
Able to print on card (157gsm - Manual Feed)	YES	-	-	YES
Auto Sensing on Parallel and Serial ports	YES	-	-	YES
Standby -Noise Level	<40dB	31.7dB	<35dB	<38dB
Printing -Noise Level	<50dB	43.3dB	<46dB	<48dB

*As quoted by manufacturers - 2/4/92 E & OE

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FLASH ROM UPGRADABLE!

400dpi 2Mb RAM 6PPM

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Silica Systems are pleased to introduce the revolutionary, new Ricoh LP1200. It has all of the specifications that you would expect to see in today's most technically advanced laser printer, plus a unique additional feature which places it far ahead of the competition - FLASH ROM. This 'Future Proof' technology protects the investment you make when you buy a Ricoh LP1200, as it enables you to keep up to date with new laser firmware developments. FLASH ROM is an area of memory inside the LP1200 which holds the printer's controller instruction firmware. If new firmware is developed, updated printer command languages etc, can be downloaded into this memory. Other manufacturers would require you to buy a new printer! Fonts, macros, additional emulations and graphics can also be stored in FLASH ROM, or on removable FLASH ROM IC cards. The new Ricoh LP1200 is the only laser printer to offer this FLASH ROM facility.

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- ***PCL5 - SCALABLE FONTS*** – *Latest PCL version, includes HP-GL/2*
- ***SHARP EDGED PRINTING*** – *Ricoh FIAL (Fine Image ALgorithm) enhances resolution*
- ***400dpi RESOLUTION*** – *Default resolution - 300dpi. Will address 200, 240 and 400dpi.*
- ***2Mb RAM AS STANDARD*** – *Allows printing of a full A4 page of graphics at 300dpi*
- ***UNIQUE FLASH ROM*** – *For controller software upgrade and storage*
- ***IC CARD SLOT*** – *For programmable FLASH ROM cards*
- ***EXPANSION BOARD SLOT*** – *For improved connectivity to additional systems eg. PC-LAN, FAX etc*
- ***LAYOUT*** – *Document Description Language*
- ***SERIAL + PARALLEL PORTS*** – *For connection to PC compatibles and other computers*
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Before you decide when to buy your new laser printer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals or consumables, or help and advice. And, will the company you buy from contact you with details of new developments and products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for over 12 years and, with our unrivalled experience and expertise, we can now claim to meet our customers' requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest Free literature and begin to experience the "Silica Systems Service".

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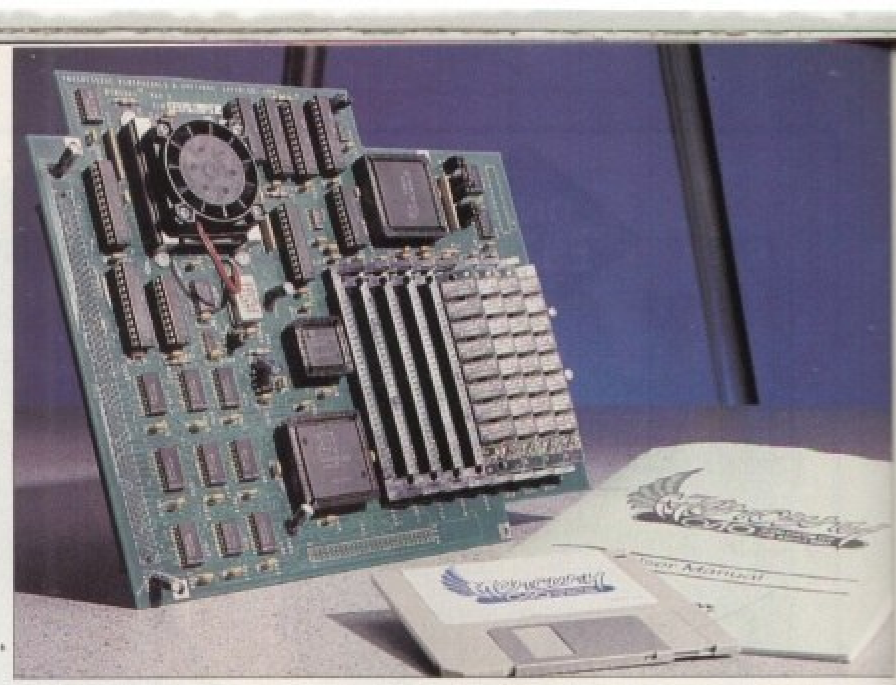
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If you listen to more than one conversation about accelerator boards, it quickly becomes clear that there's not a lot to be said about them unless you enjoy the sight of your friends collapsing at your feet in a bored stupor.

They are fast, usually provide space for extra RAM, the odd really exciting one has a hard drive interface built in, and that's it.

Having said that, the range of 68040s available is now wide enough to provide a proper buyer's choice for the Amiga's most powerful add-on, unlike a year ago when they were thinner on the ground than Gorbachev supporters.

There are only three important questions to ask of any 040 card:

- How fast is it?
- How stable is it?
- How cheap is it?

We tested the Fusion Forty card from RCS Management Inc, GVP's G-Force, and Progressive Peripherals' Mercury, all of them 28MHz cards, and asked the same three questions about each.

For testing purposes, we've used real life applications rather than the standard benchmarks because prospective buyers want to know how fast a card will run existing software, rather than how good it is at calculating the square root of its navel fluff.

Best software

Of the three boards on test, the Mercury and G-Force cards have the best software with Fusion Forty's much improved but still clunky installer disk lagging behind a bit.

All three are fairly easy to use, but G-Force employs Commodore's excellent standard installer program and the PPS install sequence takes very little time.

Again, both G-Force and Mercury make use of the official 68040.library from Commodore along with their own startup programs, giving them an apparent system-legal edge over Fusion Forty, and both automatically configure to the amount of memory on the card.

Fusion Forty's software, though hugely better than the confused mess it was six months ago, is a little less "clean" than the other two offerings. Most of this, thankfully, is transparent to the user as installation is just as quick and painless as Mercury or G-Force, except that the user has to choose a particular installer for the board's RAM configuration.

The Fusion does not use Commodore's 68040.library, but this doesn't seem to make much difference as it is easily as stable and compatible as the other two boards and if anything is a bit better certainly than the G-Force card, if not the Mercury.

Unfortunately, the resident Fusion Forty code alters Cold Capture and KickTag vectors to the dismay of most virus checkers. This is unavoidable given the route taken by RCS to implement the 040, but it's still a tad annoying to have to click four times to cancel a Zerovirus requester every time you boot up. In addition, at time of going to press, RCS are still working on a software update to allow Fusion Forty to accept the presence of 16-bit fast RAM, with which it will not co-exist at the moment.

In stability terms, the only card to give me more than the usual clutch of problems was G-Force. Before it would work with the office A3000 I had to remove a resistor from the card – something the manual claimed should only be necessary with A3000 tower systems – and there were significantly more hang-ups during a warm reboot than with the other cards.

Once booted, G-Force was as well behaved as the rest of the gang and worked very smoothly, so the problem is not seriously detrimental to GVP's latest baby.

All the cards are supplied with control software to allow data and instruction caches and copyback mode to be turned on and off, which is just as well.

Some software will drop dead if you try to run it with copyback on and any peripherals or software packages which make direct memory accesses (DMA) will fail to pick up on the contents of the CPU's data cache thus promptly – and messily – expiring.

For the purposes of switching out of 68040 mode when the odd piece of software refuses to speak to the new card, Fusion Forty employs a hardware switch which sticks out of the back of the machine and the others use software switches available through icons on the Workbench screen. All require rebooting once a switch has taken place and all worked well. The improved Fusion Forty 68000 mode now runs at the proper speed and automatically detects which position the hardware switch is in – unlike the original, which would run 68000 mode at half speed and had to be told which mode you wanted at startup.

Complex

The long term stability of any 68040 card will often depend on heat build up, which is a particular problem with chips as complex and transistor-crammed as these.

G-Force and Mercury take care of the problem by means of a miniature fan mounted on top of the 68040 CPU while Fusion Forty has stuck with the immensely ugly heat sink of the original cards.

Both solutions seem to work perfectly well, and none of the cards became unstable during prolonged operation, even when this involved extended stints with Imagine v2.0 renders.

Fusion Forty has a small advantage when it comes to the rest of the chips on the board as the A2000 shell is better ventilated than the A3000's, but this didn't make an appreciable difference.

So much for stability. The next question, and the one you've probably been waiting most for the answer to, is that of speed.

Dozens of silly and downright ridiculous claims for the benefits offered by 68040s have been made since the first cards became available, and most of them are plain wrong.

Using benchmarks, which we provided last month as a quick indicator of the relative speed of the cards, it is just about possible to claim a 10,000 per cent (100 times) increase over a standard A500/A2000, but in practice you won't get close to this figure.

The roaring



This is because most benchmarks run in very small amounts of memory so that they usually fit in the data cache on the chip itself, and they test only for internal speed ratings.

The results don't take into account screen refreshes, hard drive access times, or any of the Amiga's custom chips which must be used in most day-to-day operations and which still run at 8MHz.

For this reason we've done away with benchmarks this month and concentrated on real-life applications such as PageStream, Art Department Professional, and so on.

For a discussion of how these tests were set up, we've listed how each one was done, and the results are given in numerical and graphical form to suit most needs.

Don't get annoyed because we've used an A3000 for our test results. To compare an 040 to an A2000 or A500 is about as pointless as comparing Concorde to a Gypsy Moth – they use different methods of propulsion and live worlds apart.

Suffered

Pundits and old lags might be surprised, given GVP's record in the accelerator business, to find that G-Force suffered in comparison to Fusion Forty and Mercury. So were we, but the test results don't lie unless our copy of PageStream has suddenly developed a mind of its own complete with opinions and prejudices.

Remember that all boards and software were installed exactly as the manufacturers recommend, and that all caches and copyback modes were utilised for maximum speed.

If anything, the Fusion Forty was the only board discriminated against as it was running in a 16-bit A2000 rather than a 32-bit A3000 and did not have the advantage of the A3000's quicker screen refresh for tests such as the PageStream page zoom.

The results show that last month's benchmarks, if not particularly relevant to real applications, were a good indicator of the relative speeds of the boards. Mercury emerges as the clear leader, in some cases embarrassingly so, with Fusion Forty in the middle and G-Force bringing up the rear.

This neatly inverts the prices of the units, as G-Force is the most expensive and Fusion the cheapest. Of course, when buying a unit as expensive as an 040 the price has to be offset by technical backup and future support, which is where the two more expensive cards will score over Fusion Forty.

The latter, however can hit back with a UK technical support line supplied by Hydra systems, the board's distributor, which is as good as Silica Systems' support for G-Force.

Choices

Put a gun to my head and ask me to choose between the boards and I'd have to go for the Mercury on A3000s and the Fusion on A2000s, both in terms of price and performance.

If you want the GVP name and reputation for reliability, by all means buy a G-Force, but for a more expandable system I'd stick with one of the others, both of which can accept up to 32Mb RAM as opposed to the GVP's 8Mb.

If PPS can ship the Mercury 2000 for a similar price to Fusion Forty (current US price is $2,430 – about £1,500 – for the 4Mb RAM version) the choice in this field would be very difficult, though would probably swing in Fusion's favour given the UK availability of technical help.

If you've got the cash and a high-end application which needs a bit of extra oomph, I'd recommend any 68040 card. They simply jump all over the tender parts of 68030 accelerators and transform your Amiga in five minutes into a machine only the very fastest 486 PCs can match. AC

Test information

To ensure the tests were at the same time strict and fair, a careful note was kept of the exact settings used in each. The following is a list of those settings in case anyone cares to confirm or deny our findings:

ADPro: Convert 787k Targa to HAM and display on-screen. Lo-res, interlace, overscan, PAL.

PageStream: Zoom from full page view to 121 per cent. Text greeking set to 4pt, page full of bitmap graphics and bold Stone Sans 6pt body text – chosen for its slowness to update.

DPaint IV: Full screen fill. HAM mode, interlace, translucency on, anti-alias set to high.

PowerPacker 4.0: Crunch 787k Targa data file. Large speed-up buffer, best efficiency.

Imagine 2.0: Render very complex galleon scene. ILBM 24-bit, Trace method, image size 704 x 582, lights cast shadows.

G-Force is a product of Great Valley Products Inc
Distributor: Silica Systems
Phone: 081-309 1111
Price: £1,899 (0Mb RAM)

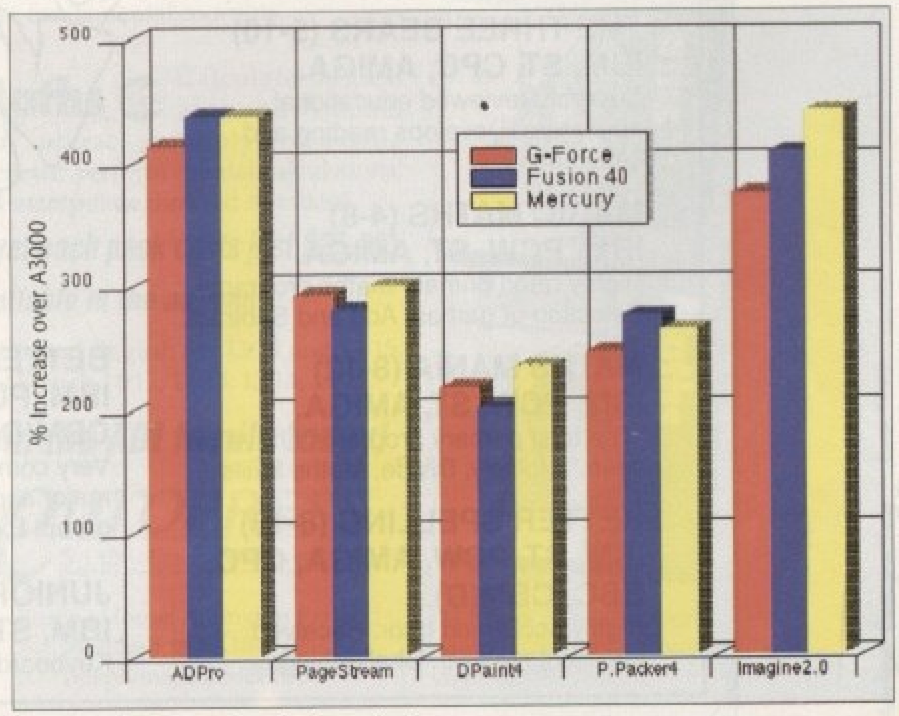
Fusion Forty is a product of RCS Management Inc
Distributor: Hydra Systems
Phone: 0203 471111
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Mercury 3000 is a product of Progressive Peripherals and Software
Distributor: Marcam Ltd
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Price: $2,749.95 (4Mb RAM). No UK price as yet.

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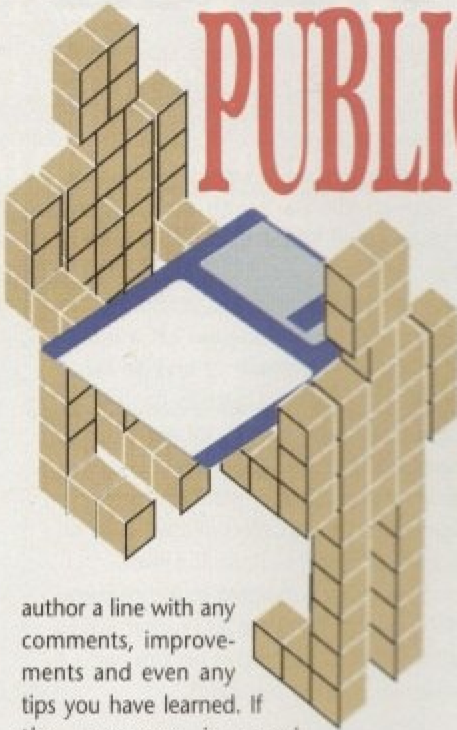
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PUBLIC SECTOR



From techno to tutorials, Darren Evans presents this month's mind-boggling array of software on the cheap

Amiga Introduction Package

Battleaxe PD

Being the new owner of an Amiga can be pretty daunting. That machine you have there is pretty awesome and complicated. You may have seen other Amigas up and running with their own startup sequences on disk and want to know how to create your own – or you may be unsure just what a virus is and how to avoid or get rid of one.

Nearly every new owner has these initial problems, but unless you have a friend who is experienced at using the beast, you are in for a frustrating time.

Well luckily, now that the Amiga has been around for quite a while, there are a wealth of people out there who have overcome these initial problems and are now able to share their knowledge with the less experienced.

One such person is Ron Fonteine, who has produced a three-disk introduction package aimed at alleviating the problems first encountered by the new user.

The disks contain a collection of programs such as disk utilities, text editors and text file display programs, virus killers and communication packages to name but a few.

Also on the disks is information on such topics as creating startup sequences and bootable disks, and explanations of what a virus is and the varying types you may encounter.

Accessing the information is made very easy by the use of a very friendly "perusing system" written by Nico Francois, a name not unfamiliar in the PD circuit. It consists of a series of menus and submenus, each selectable using the mouse.

The disks are described as "postcardware", which means that if you use them and find them useful, you should drop the author a line with any comments, improvements and even any tips you have learned. If the response is good enough, there will be further development of the program with future updates.



The novice friendly menu system makes getting at that elusive information extremely painless

Electronic magazines

TDH and Digital Access

Another good source of information about the Amiga is provided by disk-based magazines. Again, if you are new to the Amiga, these can be a great help in finding out how to get the best from your machine. They also contain some good PD programs .

So when two such disk-based mags were found among the *Amiga Computing* postal avalanche, I decided to give them a plug.

The first is called *TDH*. Apparently, the title is formed from the first letters of the three guys who compile it, Tom, Dick and Harry! The first issue is public domain so you are allowed to copy it and give it to your friends to look at. Sections covered include music, graphics, utilities, PD and Amos, with a slight bias towards Amos software. This bias is due to the fact that the founders are all apparently Amos mad – in fact, the mag is mostly created using the language.

However, readers without this popular programming language are equally catered for, so don't be misled into thinking it is purely an Amos-dedicated magazine.

The magazine uses a custom "perusing" program, as is common with a lot of electronic magazines, and seems to be quite competently put together.

It is not monthly, but is released as soon as enough material is received. Generally though, it is available every month or two.

Subscription for three issues is £5.50 (UK), £7 (Europe) and £8.50 (rest of the world). Individual issues are available for £2 (UK), £2.50 (Europe) and £3 (rest of world). Make cheques or postal orders – sterling only if outside UK – payable to:

TDH (Orders), 1 Westwood Gardens
Scarborough YO11 2JA

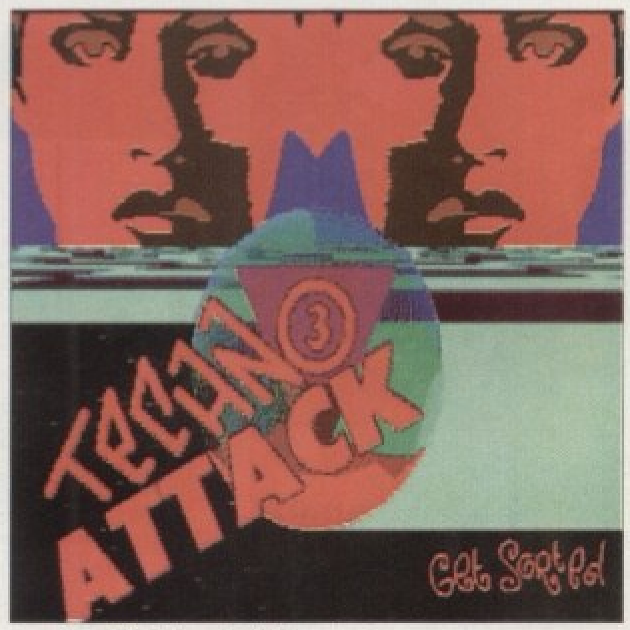
The second mag is actually at issue 7 at the time of writing, and is called *Digital Access*. It is a bimonthly production and comes on two disks. The actual magazine is accessed purely through the Workbench, the philosophy being that everyone is familiar with it.

All PD programs on the disk I received were tested for A500 Plus compatibility, with any incompatible programs in future editions being listed in the contents file.

The magazine's aim is to provide a variety of the latest PD software and to give help and advice through its articles. The issue I received was well produced and contained a fair number of programs.

To get an issue, contact:

Steven Lord, Digital Access
6 Stubbing Brink, Hebden Bridge, HX7 6LR



Rave it up with Techno Attack 3

Techno Attack Vol 3

17 Bit Software Disk SS 13

Now I must say I'm quite partial to a little techno or rave music. Living in Little Hulton (a hip, grass roots Manchester suburb – Ed), I sometimes wake up on a Sunday morning to the sounds of such groups as Oceanic or Happy Mondays issuing from a neighbour's open window.

Therefore, when 17 Bit Software sent me this music disk, I decided to pump up the volume in the *ST User* office.

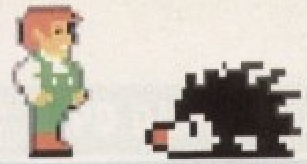
Quicker than you could say "get sorted", our production editor Phil was weaving his way between art editors at breakneck speed towards the source of the sounds. It seems our Phil likes his techno too.

The disk contains three digitised renditions of rave, entitled Can U Feel it, Magnesia and Activ-8. They are all played using the OctaMED player and the sound quality is excellent.

As well as the music, there is also a visual treat in store if you run the pix-n-things program accompanying the music files. This displays some neat visuals which are shown along with the sounds.

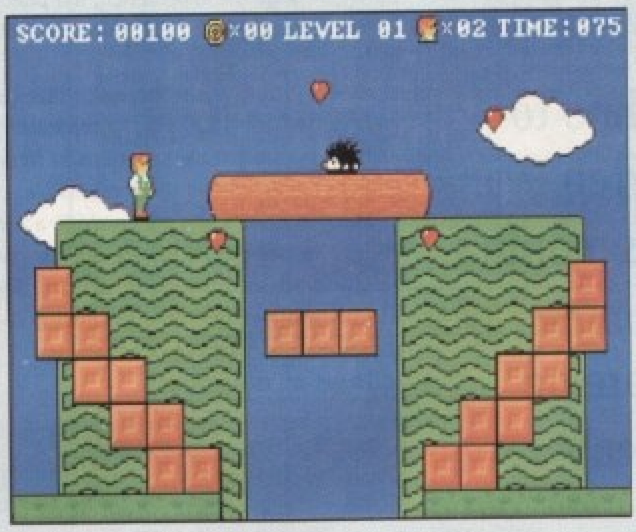
Techno Attack is not PD but is licensed exclusively to 17 Bit software.so you won't find it in any other PD library.

If you find rave riveting, then just hook up your Amiga to the old Hi-fi and let the sounds on this kickin' disk enter your ears.



Peter's Quest: For The Love Of Daphne

Amiganuts • Disk No 1226



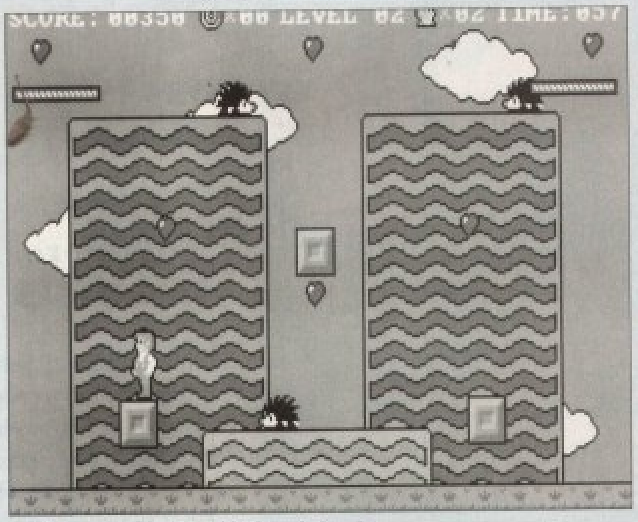
It's a rough old world. Take Peter's predicament for instance. There he is, walking through the park with his girlfriend Daphne, when this evil dude called Brutus thumps him unconscious and steals his girl.

To cap it all, he's locked in the park and has to find his way out to eventually rescue Daphne. Luckily, she has left a trail of hearts to follow, so Peter sets off on his search for his beloved.

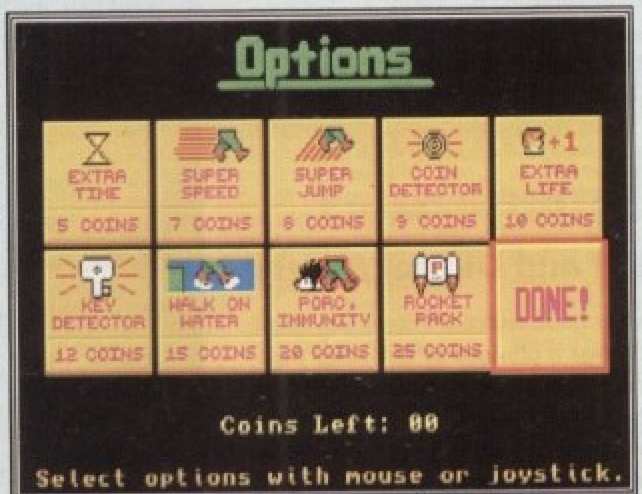
Peter's quest is a platform game with 20 levels to negotiate if you are to reach Daphne, who is being held by Brutus on – yes, you've guessed it – the very last level.

Each level consists of an arrangement of platforms and very prickly and lethal porcupines. You must collect all the hearts on the screen within the allotted time limit to finish the level.

The game is quite good with a neat digitised music intro and digitised sound effects throughout. There are also power-ups to buy such as super speed, super jump and rocket pack to name a few, which add a little more spice to the playability.



Prickly problems abound in Peter's Quest



The mega power-ups available in the game

Demolition Mission

17 Bit Software

Disk No 1747

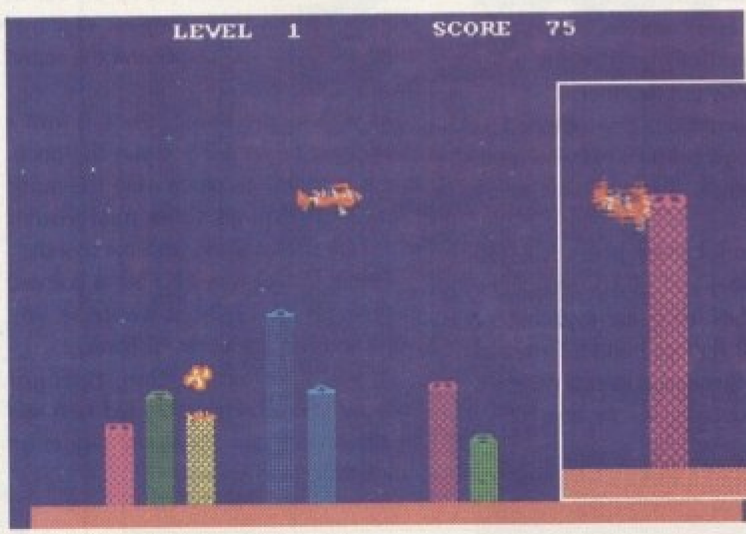
Blimey! This is a blast from the past for me. This was the first game I ever wrote after having learned Basic on my trusty old Commodore 64 about six years ago. The name of the original escapes me, but I was hooked on it at the time.

They say small things amuse small minds, and I have to admit addiction to this new version. The idea is simple, as is the gameplay. You are a biplane pilot who is getting closer and closer to some many-storey buildings at the bottom of the screen. You must drop bombs on these buildings to make way for your landing.



If your timing is not up to scratch, you will eventually run into the side of a obstructing building, crumpling up before falling to the ground. The graphics aren't spectacular and the sound isn't anything to rave to, but it is still a brill little game.

Children will have a hard time kicking Dad off the computer to play this one!



An old idea but addictive all the same



This is your fate if your timing is not up to scratch

Opti-Comms 2

17 Bit Software

Disk No 1792

I can safely say that this disk, compiled by The Optimiser, who runs a BBS of his own, is positively crammed with useful comms utilities.

I think the singularity at the centre of a black hole would have to strain its capabilities for compression to achieve a similar result.

Utilities contained on the disk include CpuBlit, a program for those of you with 68020/030 systems, which doubles the speed of text scrolling; Ncom, a script language which is used to create Ascii text files of commands to automate such mundane chores as logging on, to grabbing mail and posting it on another BBS; and Zoom v5.40, a disk tracking and archiver program.

There is also a large list of UK STD codes in numerical order. These are just some of the useful programs that any comms connoisseur will find very useful indeed.

EdWord v2.2

Amiganuts

Disk No 1236

Text editors don't exactly make you jump up and down in anticipation while they load, yet where would we be without them?

They are fundamentally important in computing life, rather like a certain magazine not too distant from your visual organs at this very instant. So it is hard to ignore them, especially when they are well written and feature packed, as EdWord is.

EdWord began as a programmers' integrated editor/compiler which could be used for any language. However, with a constant list of features being added during development, it soon evolved into quite a powerful general purpose text editor with facilities such as block commands, search operations and an Undo function.

The programmer will find some of EdWord's features very useful. These include auto-indenting, casing of keywords (forcing them to uppercase), number base converter and the ability to send AmigaDOS commands.

It is entirely menu-driven, making it simple to use. It would be a mistake to compare it to a wordprocessor however, for it lacks such facilities as margin setting, typeface alterations and page numbering.

EdWord is shareware and I am led to believe the author, Martin Reddy, will welcome a minimum £5 contribution for his Irn Bru addiction.

A good all-round editor any programmer will find useful.

Chemesthetics v2.10

Amiganuts

Disk No 1225

This is one for the boffins. It is a program that will generate and display molecules as a Calotte model (no I don't know what a Calotte model is either).

The display generated is a 3D light-sourced image. You are able to view the molecule from any angle and also magnify it or reduce it. You can also change the position of the light source.

The images can be very slow to draw due to the calculations involved. The one shown on this page took 45 minutes to ➤



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- 911 LLAMATRON
- +913 WHEEL OF FORTUNE
- +915 MISSILE COMMAND
- +916 AMEOBA INVADERS
- +917 ROLLERPEDE, INVADERS
- 918 AIRMANIA. A chance to win an around the world flight with this.
- +919 ZEUS
- +920 HOLLYWOOD TRIVIA
- +922 THE SIMPSONS
- 925 WIZZY'S QUEST
- +926 THINK TWICE ....Master Mind
- +927 HYPER-BALL........Arkanoid clone
- +929 SEALANCE ..Submarine Sim, Good
- +930 SHAPES ....Good for Kidz
- +931 WACKO Jr In Wonderland
- 932 TRUCKIN ON........1 Meg 2 Drives
- +934 SCRABBLE
- +935 WORMHOLE
- +936 ANAGRAMS
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AM/FM is a recently started disk mag for Amiga users who are musically interested. It covers all aspects of using the Amiga for sound and music production, bringing News, Reviews, Gossip, Tutorials as well as 3-4 selected Amiga only songs, 3-4 Midi songs and 2-5 selected Sound/Music utilities in each issue. Created by some 20 professional musicians including Bjorn Lynne and Teijo Kinnuenen . . .
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finish. Once completed though, you can save the result to disk in IFF format.

The substances which are poisonous – such as nicotine or dioxine – tend to produce the more interesting pictures!

Airmania

Addware

Remember the Piman? That disgusting cult figure of way back when? Well now Mel Croucher, father of the Piman and inventor of budget software (along with Paul Cooper), has seen fit to bring the Piman out of retirement in the first Addware game, Airmania.

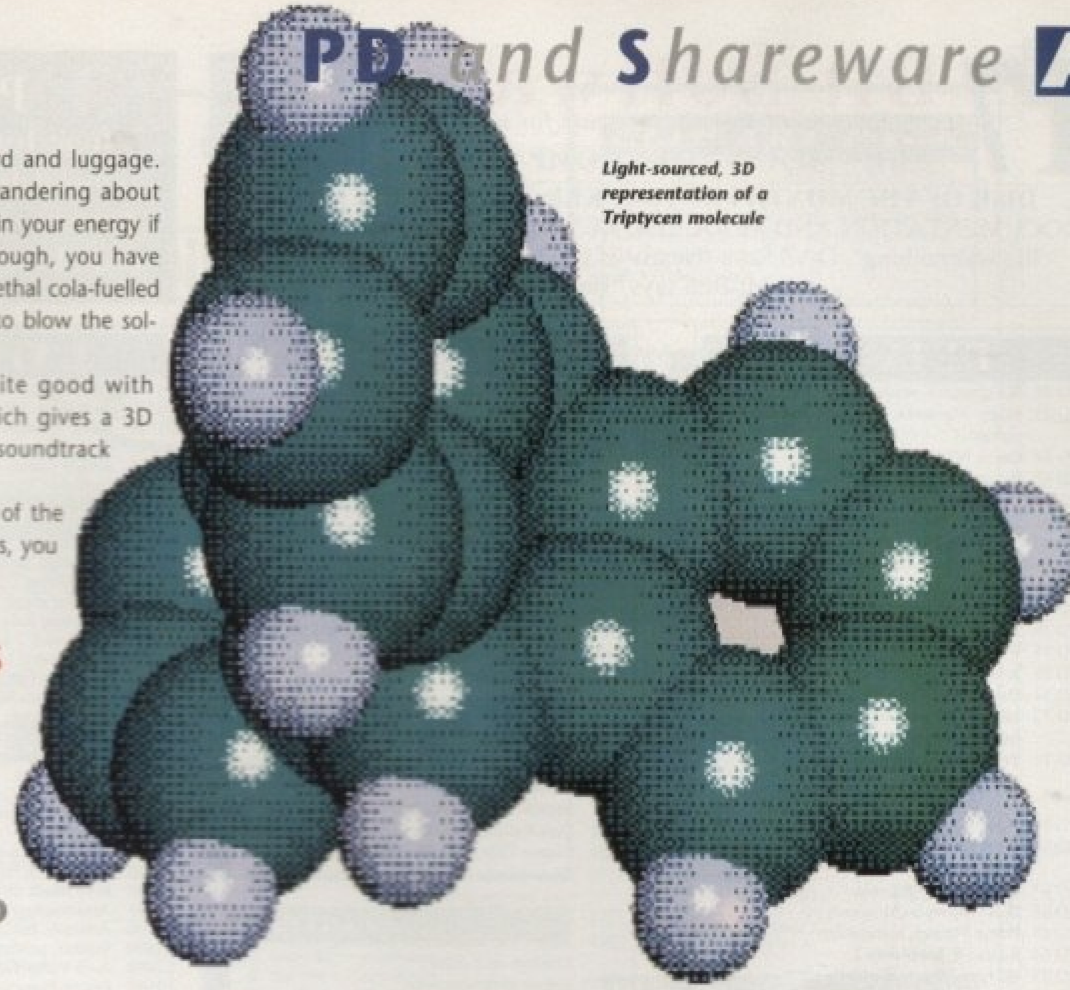
Addware is a new concept developed by Mel and Paul Cooper, similar in concept to shareware. The game can be freely copied only in its entirety and at no profit, but remains the copyright of Addware.

However, if you register with Addware – for a fee – and if you complete the game, you are in with a chance of winning a round-the-world air trip or air travel to anywhere equivalent to the same value.

You control the Piman in his attempt to catch his flight to the next level. Along the way, you have to collect such items as your passport, credit card and luggage. There are toy soldiers wandering about the terminal who will drain your energy if you hit them. Luckily though, you have your "parp power". This lethal cola-fuelled weapon will enable you to blow the soldiers away.

The graphics are quite good with multi-level scrolling which gives a 3D effect. There is a good soundtrack too.

If you were a big fan of the Piman in your earlier years, you will like this game.



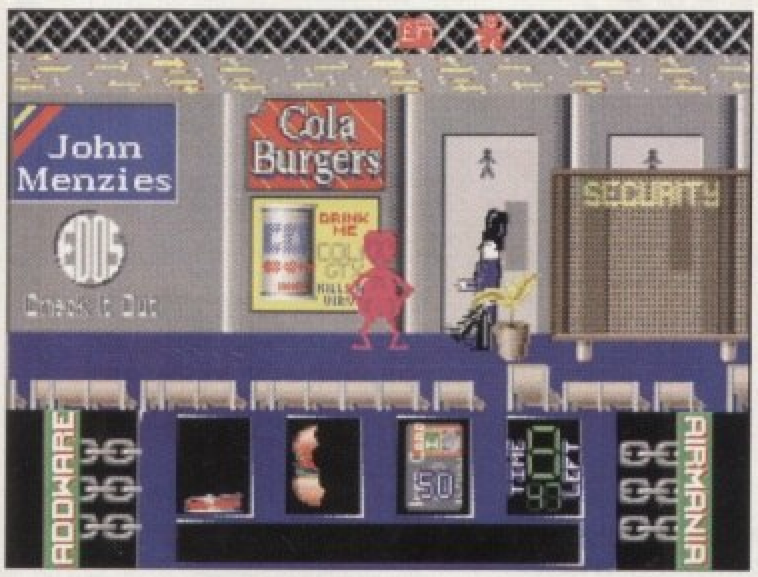
Light-sourced, 3D representation of a Triptycen molecule

Addams Family Demo

Burmans Amiga PD Disk No BPD 134

This demo by Excalibur and Pawn had our art editor Terry tapping his feet. It consists of the catchy theme tune and various slide-show shots from the cult black-and-white TV series that I was hooked on. All the cast are featured, including Lurch, Uncle Fester and Thing – the disembodied hand that always inhabited a box.

The digitised sound track is pretty good too. It requires 1Mb to run.



He's mean, he's ugly and he's back in Airmania

Deluxe Paint III Tutorial

Battleaxe PD

Those of you who have used Deluxe Paint know the vast amount of effects at your fingertips. The manual contains information on the effects available, but it cannot hope to cover every possible result from using combinations of each effect.

This disk, from Amiga Fantasy – who did the Amiga Introduction Package described earlier – contains graphic effects and designs from Gator, as well as step-by-step descriptions on how each design was produced. The disk is bilingual with German or English instructions to choose from. Some of the artwork is quite good and although the English isn't perfect, it's informative and understandable. If you are a budding artist, you will find this tutorial very useful.



Family togetherness Addams style

Where to get 'em

17 Bit Software (Dept AC)
1st Floor Offices
2/8 Market St
Wakefield
WF1 1DH
Tel. 0924 366982

Battleaxe PD (AMC)
125 Kingswood
Thorpe Marriot
Norwich
NR8 6UW
Tel. 0603 261060

Amiganuts United
169 Dale Valley Rd
Hollybrook
Southampton
SQ1 6QX

Addware Ltd
PO Box 1992
Southampton
SO9 7HX

My apologies to Burmans PD who supplied the Addams Family demo. I seem to have misplaced their address. If you could get in touch, I will include it in next month's issue.

17 Bit Software

Quality public domain software for the Amiga

THE * MEANS NOT + COMPATIBLE

Sexy Trish says do not order pornographic disks, as we do not supply them. This has been a Daz information film

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PROJECT X

PROJECT X The latest arcade smash from Team 17 available now only £17.99, with 21 PD games absolutely free. This game has received every accolade known to man, and is the ultimate blast for your Amiga on the market today. Blister those fingers now!!! Mr Bun 100% Arcade Action!!

DEJA-VU

LPD 86 N Command, needs Amos
LPD 85 Magic Wassocks, Platforms game (very playable)
LPD 84 Quess Who, neat puzzle game.
LPD 83 Picture Hangman (Good fun)
LPD 82 Colouring Book 2 (Brilliant)
LPD 81 Pools Pro Predictor (Brill)
LPD 80 Icon Bank Editor
LPD 79 Music Engine, (Music Player)
LPD 78 Spectra, colour puzzle game
LPD 77 Powerbase, great Database
LPD 76 Tecc Maze, puzzle game
LPD 75 Video Lab, Titling progs
LPD 74 Sour Grapes, QBert style game
LPD 73 Database v3.0, superb Database
LPD 72 Monster Island, Dungeon Master for the younger player
LPD 71 Battlecars, smash those mothers, great car game
LPD 70 Paint Box, junior paint prog
LPD 69 Magical Mix Up, good game
LPD 68 Virus Buster, the best virus disk available today
LPD 67 Cyadonia, mega game
LPD 66 Hotel Manager (Monopoly)
LPD 65 Power Planner, home utility
LPD 64 Rescue 2, better than 1
LPD 63 Wilberts Winter Wonderland
LPD 62 Revolution
LPD 61 The Final Chapter, game
LPD 60 Techno Snail, platform game
LPD 59 Prehistoric fun pack
LPD 58 Locks Keys + Enemies
LPD 57 Kiddies Clipart
LPD 56 X Text, needs Amos
LPD 55 Spritex, needs Amos
LPD 54 Magpies Clipart disk 4
LPD 53 Magpies Clipart disk 3
LPD 52 LC24/200 Fonts v1.0A
LPD 51 Magical Young Artist
LPD 50 Magpies Clipart disk 2
LPD 49 Marvin the Martian
LPD 48 Sparx Stockin filler
LPD 47 Dirty Cash, fruit machine
LPD 46 Magpies Clipart disk 1
LPD 45 Music Box, like Sonix, very nice
LPD 44 Formula 1 Challenge v2.0
LPD 43 Amos Lazerzone
LPD 42 X-Stitch
LPD 41 Rescue, great 3D game
LPD 40 Sprite Bank Editor v2.0

ALL THE ABOVE DISKS ARE PROFESSIONALLY WRITTEN PROGRAMS, WITH A FEE GOING TO THE AUTHORS ALL ARE £3.50 EACH, PLEASE ADD 50P TO ALL ORDERS FOR P+P, THANK YOU

LATEST PD

1749 Microbes, superb arcade game
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1756 Dolly Mixture 21, Intro's comp
1757* The Bouncer remix version 2
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1761 As above disk 2
1762 Fonts disk
1763 TV Graphics disk
1764 Skoda Challenge (driving game)
1765 Games Tamer and Joy Tester
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1767 Superb Fractal disk, fast fun
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1769 Classic Utils (the cream of PD)
1770 Ripped Icons (over 80) to use and edit with your own programs
1771 Instruments disk (Med, Protraker)
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1773* Angels evolution demo
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1777 Viking Saga, 1 Meg anim
1778 Real Things Horses (1 Meg anim)
1779 Brian Badlands comic art
1748 Yum Yum (game)
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1746 Genesis Mega Demo (good stuff)
1745 Mad Mixers Demo
1744 Creepshow Slides 2 (great disk)
1743 Intro Maker
1742 Wastelands (game)
1741 Survivor (game)
1740 Noiseplayer 1.0
1739 Superkillers 2.2 (great Virus disk)
1738 A&B Fractal Mountain slideshow on 2 disks, great
1737 Too much 3D, 1 Meg Anim
1736* Easter Island Animation (1 Meg)
1735 Escap v2.0 (game)
1734 Issue 3 of + Owners utils
1733 Issue 2 of the above
1732 Quarix, Great Game
1731 Napalm Death Slideshow
1730* Airline Safety, comic sketch
1729 A&B Not the 9 O'clock News

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1728* 500 Things 2 from Nic Cusworth
1727* A+B Opus 2 Evolution rush
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1725* Opus 2 Fine day remix
1724 Arcade Games comp
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1722 Diplomacy, good strategy game
1721 File Locator and seeker, utils
1720 Superdooper, sys info 2.55
1719 A+B Giga music disk, brill
1718 A+B Whom 2 v2.2 cult info
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1712 Music of the World
1711* Silicon sounds
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1709 Clipart Fonts
1708 Clipart Fonts
1707 Boot Utils
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1705* Slideshow
1704 Household Inventry (Home util)
1703 Text Plus 3, brill disk
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U145 – Total Utils 1-20 – Utilities
U152 – Xenon Utils – Seventy-five utilities
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U161 – Anthrox Utils *V5* – Recommended!
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U232 – Gelignite fonts 2 – Mark & Dan (ta)
U233/4 – WindowsBench V2 – Mikesoft. (ta)
U237 – Insanity Tools – 203 tools no docs
U238 – Gelignite fonts 3 – Mark at his best
U240 – OptiCOMMS 2 – NCOMM V2.0
U241/2/3/4/5 – PageStream Fonts – 5 disks
U246/7 – Clip-It Vol 6 – Mythological beasts

EDUCATIONAL & GAMES

G31/2 – Star Trek – By Tobias Richter
G35 – Board Games – Includes Monopoly
G39 – Flaschbier – Excellent game
G43 – Megaball – Brilliant breakout clone
G50 – Shapes – Absolutely brilliant for kids
G53 – Zeus – Very addictive tile game
G55 – Sealance – Sub strategy type game
G62 – POM POM Gunner – *Very Good!*
G70 – Skier – Excellent game
G72 – Snakepit – Suitable for the kids, good
G80 – Peter's Quest – Lovely graphics
G91 – Insiders Club – Stock Market strategy
APD59 – Super Quiz – Excellent quiz game
APD62 – Arcadia – Nice breakout clone
APD110 – Crossfire – Very nicely done
APD115 – Baloonacy – Superb for the kids
APD130 – Wooden Ball – Brilliant!!!
APD142 – Pair Crazy – Very good
APD146 – Fruit Machine – For the addict
APD148 – Demolition mission
APD160 – Quizmaster – Excellent
APD178 – Mastermind/Pairup – Good
APD180/1 – Dungeon Delver – Brilliant
APD182/3 – Pixie Kingdom – Very good
APD314 – Blackjack Trainer – Superb
APD315 – Silver Bars & The Enemy
APD326 – Hyperball – *Best yet, get it*
APD329 – Fruit Machine – Brilliant game

BUSINESS & SERIOUS

B02 – Wordwright – Wordprocessor
B04 – Clerk – Accounting
B06 – U-Edit – Very powerful wordprocessor
B07 – Flexibase – Powerful yet easy to use
B10 – Inventory & Memopad – Very handy
B12 – Business Card Maker – Pretty Good
B14 – Visicalc – Similar to Lotus 1-2-3 on PC
B17 – QED – Superb text editor
B18 – Textplus *V3.0E* – Edit crunched files!
B19 – 600 Business Letters – Brilliant
B21 – BBase II – Easy to use database
B22 – DataBase Wiz – Name & address
B23 – Textengine V3 – Superb
B30 – Amibase Pro III – Ex Licenceware
APD52 – Forms Really Unlimited
APD132 – Family History Database
APD138 – Spanish Tutor – Pretty good!
APD257 – Cassette Labeller – For the inlays

SLIDESHOWS & PICS

P11/2 – Nasa Slideshows – Both 1 & 2 here
P25 – Roger Dean – Excellent slideshow
P32 – Agatron 6 – From Tobias Richter
P33 – Agatron 8 – More from TRs stable
P40 – Max's Art – Very nicely done
P41 – Nemesis Prologue – From Hanibal
P48 – Psygnosis Slideshow – Rather brilliant
P54 – Sunconnection – More from this group
P62/3 Channel 42 & Silents – Very good
P65 – Agatron 12 – Fantastic quality
P66 – Fraxion Future Visions – Very good
P67 – Agatron 11 – Incredible standards
P76/7 – Nemesis Chapt. 1 – The next chapter
P78/8 – Laurel & Hardy – Brilliant for fans
P83 – Invisible World – Bugs n things
P85 – Robocop – By Hanibal, *Unbelievable!!*
P89 – Art for Arts Sake – By Hanibal, Brill

ANIMATIONS (most 1mb)

A06 – More Aerotoons – By Eric Schwartz
A10 – Batman – This is brilliant (by ES)
A11 – Puggs in Space – Brilliant
A12 – Probe – The most famous of all anims
A13 – Agatron 2 – Includes F15 fighter
A17 – Stealthy II – Excellent little animation
A19 – Star Trek Fleet Manoeuvres – Good
A20 – Agatron 26 – Dry dock
A49 – Fractal Flight – Small screen anim.
A58 – Walk – Brilliant chrome legs walking
A61 – Agatron 15 – Billiards & Lotus + F15
A62 – Stamp Collector – Brilliant sequence
A63 – Juggler II – Very, very funny. See it!
A76 – Agatron 30 – Millenium Falcon
A79 – Agatron 33 – Probe & bird of prey
A83 – Discovery Shuttle – Very good
A87 – Car – Lotus & Unicycle, brilliant
A89 – Agatron 22 – Includes aproach + more
A90 – Agatron 20 – Belle Huey Helicopter
A94/5 – X-Wing – Rather brilliant sequence
A96/7 – Light Cycle – From Tron and Brill!
A98/9 – Anti-Lemmings – 2 Meg
A100/1/2/3/4/5 – The Wall – Exceptional
A107/8/9/10 – The Landing – 4 Meg
A112 – Juggette II – Another hilarious anim
A115 – Agatron 27 – Book and others
A116 – Agatron 28 – Disconnect, Beautiful
A117 – Agatron 29 – Millenium Falcon
A124 – Shuttlecock – By Eric Schwartz
A126 – Real 3D Anim – "Real Pinball"
A127 – Real 3D Anim2 – T-Pot and balls (7)

MUSIC

M01 – Sound Samples – Includes perfect sound
M04 – Vangelis – Brilliant music & graphics
M10 – Jean Michel Jarre – With good pics
M18 – Amigadeus – By Rod Baxter, Brill
M19 – Classix 1 – Mr Baxter strikes again!
M20 – Classix 2 – More of his formidable work
M34 – APDC II – Sound Utilities
M35 – APDL 28 – *MIDI UTILITIES*
M52/3/4/5 – Modules – Need I say more?
M58/9/60 – Metal Modules – Good
M61/2/3 – Sound samples for S/Tracker
M115 – Scoopex Music Utils – By the score
M131 – Deluxe Music Data – Needs DM
M145 – Midi Programmes
M152 – Midi Programmes – More
M165 – MED *V3.2* – Fantastic music editor
M172 – Audiomagic *V1.1* – Brilliant utilities
M192 – Do The Bartman Re-Mix!!
M196 – Powerlords Sound Utilities
M198/9 – Vivaldi – By Rob Baxter
M201/2/3 – House Samples
M208/9 – RSI Modules Disks
M216 – Drums & Pipes – Brilliant
M223 – RSI Modules Disk 3
M225 – Audiomagic *V2* – More utilities
M227 – Psygnosis Samples – Sound samples
M230 – Jean Michel Jarre Live – *Brilliant*
M234 – Delta Music Editor – Very good

DEJA VU (incorporating AMOS licenceware) £3.50

LPD5 – Jungle Bungle – Superb adventure game for kids, Icon driven — 1 meg
LPD8 – Work & Play – 3 educational games for young kids. Recommended — 1 meg
LPD14 – Play It Safe – Aimed at educating the young kids about safety — 1 meg
LPD22 – LC10/200 Fonts – This enables you to install more fonts in your printer — 512k
LPD27 - Flower Power – Educationally orientated for the very young — 1 meg
LPD28 – BudBase1 – Beautifully easy to use and extremely user-friendly, try it — 512k
LPD29 – Big Top Fun – Yet another brilliant educational game from Len Tucker — 1 meg
LPD32 – Hard Drive Menu System – Superb hard drive utility, used by us!
LPD34 – Invoice Printer – For use by the Small Business firms on own headed paper — 1 meg
LPD35 – T-TecDraw – Full technical drawing program. Fantastic results. — 1 meg
LPD38 – Amos Art – Full of goodies for inclusion in your own AMOS creations
LPD40 – SpriteBank Editor – Bloody Superb. Need I say more? — Needs AMOS
LPD45 – MUSIC BOX – The ultimate in music education for kids — 1 meg
LPD46 – Magpies Clipart – Crystal clear images of clipart, categorised — 512k
LPD47 – Dirty Cash – Beautifully done fruit machine simulator, excellent — 1 meg
LPD50 – Magpies Clipart 2 – More quality clipart images from the magpie — 512k
LPD51 – Magical Young Artist – A colouring in type program for kids — 512k
LPD52 – LC24/200 Fonts – Same as LDP22 but also thought to be compatible with most printers! — 512k
LPD53 – Magpies Clipart 3 — 512k
LPD54 – Magpies Clipart 4 — 512k
LPD55 – SpriteX V1.32 – An update to the earlier version and enhanced — AMOS
LPD56 – C Text V1.32 – An extension to AMOS to allow you to use icon based fonts
LPD65 – Power Planner V1.0 – An address database and appointment planner — 512k
LPD68 – Virus Buster – **Excellent** – by ROD
LPD73 – AMOS Database V3.01 — 512k
LPD75 – Video Lab – Brilliant Video titling package, very easy to use! — 1 meg
LPD77 – Powerbase – Excellent — 1 meg
LPD79 – Music Engine – Excellent music playing routine for AMOS users — AMOS
LPD81 – Pools Pro V1.1 – Pools predictor and quite good — 512k

Commercial Software

GRAPHICS

Deluxe Paint IV	£69.99
Deluxe Paint III (limited stock)	£19.99
Deluxe Print II	£44.99
Spectracolour	£69.99
DigiView Media Station	£149.99
Walt Disney Anim. Studio	£69.99
Imagine V2	£224.99
Turbo Silver	£49.99
Art Dept. Pro V2	£169.99
Real 3D Pro V1.4	£274.99
Sculpt Animate 4D Pro	£299.99
Pixel 3D V2	£89.99
ProDraw V2	£99.99
Map Master for Imagine	£49.99
Surface Master for Imagine	£24.99
F15 Anim Brushes	£14.99
Red Lotus Anim Brushes	£14.99
Animfonts 1	£29.99
Animfonts 2	£29.99
Animfonts 3	£29.99
Animfonts 4	£39.99

DESK TOP PUBLISHERS

Saxon Publisher V1.1	£199.99
Pro-Page V3	£149.99
Pagestream V2.2	£149.99
Pagestream Fonts 1	£49.99
Pagestream Fonts Plus	£49.99
Pagestream Business Forms	£29.99
Pagestream Quick Forms	£29.99
Pagesetter 2	£59.99
Pro-Page Clip Art	£39.99

PROGRAMMING

Devpack V3	£69.99
Devpack V2	£39.99
Hisoft Basic	£59.99
Hisoft Extend	£24.99
BlitzBasic	£149.99
Aztec C Pro 5.0D	£199.99
Amos	£34.99
Amos Compiler	£22.99
Amos 3D	£27.99
ARexx	£34.99
Power Windows 2.5	£69.99

PRESENTATION

Scala	£224.99
Scala 500	£99.99
Hyperbook	£59.99
Can-Do	£99.99

DATABASES

Superbase 4.0 Pro	£199.99

LITERATURE

Using ARexx (with disk)	£27.99
The Imagine Companion	£24.99
Amiga Dos Manual	£17.99
Superbase, The Book	£11.99

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PDS

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ESP

Ezra Surf's Postbag

Got something to say through the pages of AC? Ezra Surf is our mailman, dedicated to sitting in a corner reading your letters and selecting the most interesting for publication. Ezra's favourite letters now get rewarded with an exclusive Amiga Computing designer T-shirt.

Drop him a line at:

Ezra Surf's Postbag, Amiga Computing, Europa House, Adlington Park, Macclesfield SK10 4NP.

Please don't enclose saes as Ezra just hasn't got enough paper to reply personally. He might also have to shorten your letters, so don't be offended if you end up getting the chop.

Hard drive Heimdall

Last week after a hard day's work, I felt the need to relax with a new computer game, so I popped into the local software emporium. Perusing the shelves, my eye fell on Heimdall and, thinking of the excellent reviews it had received, I handed over a wad of fivers for it.

Driving home in maniacal anticipation, trying desperately to read the manual while weaving through rush hour traffic (jings! – Ed), I looked forward with relish to the coming evening. Six whole disks of glorious graphical ecstasy!

Imagine how disappointed I was when, inserting disk 0 in an attempt to install the program to my hard drive, I found that it was of the protected kind and impossible to use other than on floppies.

Holding back the tears, I hoped for as few disk swaps as possible and booted up. Three hours and three hundred disk swaps later, I found I could take no more, and another glossy box hit the shelf never to be opened again.

I am sure gameplayers all over the country must have had the same feeling on playing this sort of game. Hard drives are becoming cheaper and more popular all the time and companies like Core are putting games on more and more disks to stretch the Amiga to its limits, so why are so few games hard drive installable?

I know we have to combat piracy, but at the end of the day the games companies are hurting genuine customers. To add insult to injury, the PC section of the manual stresses how Core think their PC customers are "trustworthy" and so the game is installable on PC hard drives!

Mark Clayton, Southampton

You've raised a very sore but important point. Piracy is one thing, but equal game for equal money is just as important an issue, and at the moment the Amiga community isn't getting its fair share.

The PC market is as rife with piracy as any other, yet because of the high level of hard drive ownership, PC games almost always install on hard drives. This is far from true on the Amiga.

For single disk games there's little to worry about, and where the company concerned makes an effort to cut down on disk swaps, such as Microprose with Knights of the Sky, even two and three disk games can be relatively painless to play from floppy. However, as Heimdall shows, there are more and more games these days which come on four or more disks.

If an Amiga owner pays the same as a PC owner for a game, then he or she has a right to expect the game to be as playable, and constant disk swaps definitely affect playability.

➤

Are Commodore just after your cash?

Prize letter

Why don't Commodore bring out the Kickstart 2.04 upgrade for the Amiga 1500/2000 on a card? They could put the new ROM chip and the full ECS on it with a switch sticking out of the back of the machine to turn it on and off, thereby giving full compatibility with Kickstart 1.3 – unlike the currently popular ROM switchers which don't live up to their promise.

I believe the present upgrade options available to owners of 1.3 machines are nothing short of disgraceful. To upgrade to the level of a current 500 Plus costs £80 for the ROM and manuals, £50 for the new Denise chip, and a staggering £200 for the Super Agnus chip which isn't even an official option!

For an owner of a 1.3 Amiga, it's hardly worth paying almost £350 for the full upgrade when a new A500 Plus costs about the same. I can't help feel that owners of older machines have subsidised new owners by paying over the odds for their machines while they were still in need of serious improvements. Better machines now cost less and we don't get the benefits from developments we funded in the first place.

Anyone interested in Commodore's customer care record could also look at FMG (Commodore's official repair centre – Ed). After years of poor service and hundreds of complaints from customers, Commodore in my opinion have done nothing about it.

If some other firm brought out an Amiga-compatible equivalent to at least a 1500 Plus I'd sling my Amiga in a quarry, buy the competition, and Commodore could go forth and multiply. It's about time you Amiga magazines developed some spine and made a commitment to your readers – we don't pay upwards of £3 a month for you to ignore what's going on.

P E Browne, Eccleshill

Well said that man! While I don't agree that Commodore are the total bogeymen you seem to think they are, I quite agree that they've been both tardy and inconsiderate in regard to the Workbench 2.04 and ECS upgrades. For a sizeable manufacturer they have, over the years, left far too much of the Amiga's development to the third-party peripherals market.

Perhaps this is a consequence of a radical, far-sighted machine landing in the hands of people with considerably less imagination than its creators, or perhaps they are just too busy with other projects.

Whatever the reason, it is clear to anyone with half an ounce of grey matter that the Amiga's development as a major mass-selling contender for the PC and Macintosh has been almost completely retarded by Commodore's lack of support for the machine.

In the humble opinion of your postbag delver, Commodore should take the following steps:

- *License the Amiga's custom architecture to third-party compatible manufacturers, thus increasing competition in the market and forcing prices down.*

- *Develop the Amiga's graphics capabilities beyond their obsolete level. PCs now have a 256-colour VGA standard, and many cards giving 32,000 or even 65,000 colours onscreen at once are now available for less than £100.*

Commodore could transform the Amiga's potential in almost every field by boosting standard graphics capabilities. Industry scuttlebutt suggests this is on the cards later this year, but it should have been done ages ago and, given Commodore's previous pricing policy, will probably cost more than equivalent systems on other machines.

- *Provide technical support and a "hotline" telephone service for end users. Most other sizeable computer manufacturers, when you spend hundreds or thousands of pounds on their equipment, will support your commitment by offering prompt and useful support.*

Commodore's technical support division will speak only to dealers and there's no support for the problems experienced by most new users which, though simple, can cause a lot of people to give up and go back to their favourite game.

If one or more of the steps outlined above, or some other drastic action we can't foresee, isn't taken some time this year, we could see the Amiga squeezed from one end by games consoles and from the other by cheaper and cheaper PCs which, though archaic in their basic design and nowhere near as modern as the Amiga, offer more power for less money.

There now, is that enough "spine" for you?

I would urge all hard drive owners who feel the same to write to their favourite software companies and protest.

I mean, if the games houses don't appreciate how many potential customers there are, why should they bring out an easily pirated game for what could be a small market of Amiga hard drive owners?

Tie a yellow ribbon...

I noticed with more than a passing interest an article in another magazine about the Hewlett Packard Deskjet 500c printer which can switch from black and white to colour printing simply by changing the cartridge for the correct colour one.

Why don't other manufacturers adopt the same principle? Is this possible, or too technical? It could certainly solve some of our problems, and leads to a much better service for the end user. What do you think?

Chas Dainty, Woodford Bridge

Many other manufacturers do exactly what HP have done with the Deskjet 500c. Star's range of colour printers, for example, are capable of printing in either black and white or colour. What you may have failed to notice is the little "c" on the end of the printer's name.

The Deskjet 500c is actually a colour printer which is happy to print in boring old black and white, and is thus more expensive than a mono-only printer. If you want the same capability on your Amiga, either buy the 500c or go for one of the colour dot matrix printers. Simple, really.

Tweaks for Plus

I recently purchased an A500 Plus to replace my v1.2 A500, but soon realised that a vast quantity of my software would not work with the new Amiga.

After contacting several software companies it became evident that with an often small piece of code this incompatible software could be modified to work on the Plus. However, distribution is a problem so... *Amiga Computing* to the rescue!

If "tweaks" for popular incompatible games could be provided on CoverDisks every month, or several on a separate disk, I believe you'd have a very big first for the magazine and it would be very beneficial to your readership.

If you decide to develop the idea, please provide a tweak for Elvira at the earliest opportunity. Perhaps some more experienced hackers could use their programming skills and code some of the tweaks for us games players?

Keith Thornton, Canvey Island

Your idea is an interesting one, but its practical application is a little problematic. First of all, the majority of incompatible software is in non-AmigaDOS format so any software patch used would be difficult to implement, and the software houses are unlikely to spend the time and money on old or de-listed games to make them compatible for people who have already bought them.

This is not an irresponsible attitude, just commercial sense. The most popular older games may end up being tweaked by their authors if they still sell well, but I would be very surprised if games of more than about a year in age were converted. By far the cheapest method for someone in your position is to buy a ROM switcher for your Kickstart chip.

This won't solve all the problems, as many games are incompatible with the Denise chip rather than the 2.04 Kickstart ROM, but it would be a start, and you could always try using a ROM switcher with two Denise chips for total compatibility.

As for encouraging hackers – aka pirates – to twiddle with copyrighted code, if we took this stance we'd quite rightly end up in court five minutes later.

Ezra online

Ezra Surf can be contacted on a whole host of of bulletin boards and conferencing systems. If you have anything to say, get it of your chest online!

Amiga Computing also has its own Fidonet echo which is being carried by BBS systems throughout Europe. Any Fido sysops interested in hooking up should collect AMIGA_COMP off the backbone.

If you are experiencing difficulty, please contact Tony Miller, sysop of our home board – 01 for Amiga.

Additionally our mailman with the most, Ezra Surf, hangs out on the following services:

Service	Account number
Prestel	999800263
Telecom Gold	74:MIK911
CiX	amigacomputing
CompuServe	70007,4734
The Direction Connection	uad1132
01 for Amiga	Amiga Computing

Hacked WordPerfect

While reading your March issue, I noticed a news piece entitled "Whither WordPerfect" which stated that WordPerfect was only available on the Amiga in version 4.1.12. I enclose a disk with what I believe to be an Amiga WordPerfect v5.0 on it!

Is this version five of the program or a renamed version four? It came with a spell checker, thesaurus, and a printer disk, and as I've never used WordPerfect before I don't know if this version is a later one than 4.1.12. It was bought in Singapore last year.

Oh, and do American hard drives and interfaces work on British machines?

R D Patterson, Khamis Mushayt, Saudi Arabia

The so-called WordPerfect disk you sent us is in fact a pirated copy, as WP5.0 does not exist on the Amiga. As it was bought in the notoriously pirate-ridden Singapore, there's no doubt that it is a professionally pirated piece of software re-boxed as a new version and sold illegally.

Your first course of action should be to send a copy of the disks, complete with details of where they were purchased to the Federation Against Software Theft. Once that's done, you should wipe the disks you have, as possession of them is illegal.

This is unfortunate, but anyone buying software in Singapore should be aware that it is one of the world's busiest piracy centres. You were simply taken in by what can often be a very well produced, but pirate copy.

In answer to your question on US hard drives, our ACAS people, to whom that enquiry should really have been addressed, say that they should work perfectly.

CONTACTS

It's not what you know - it's who you know!

TECHNICAL PROBLEMS

We are happy to answer your technical problems in our ACAS section. Send your letters to **ACAS** at the address below

NEWSDESK

If you have a new story, send it to **John Butters** at the address below. If your story is URGENT call him on **0625 878888** during office hours

GALLERY

We are always on the look-out for good Amiga art. Send your work (as an IFF) to **Amiga Gallery** at the address below

EZRA SURF

Got something to tell other *Amiga Computing* readers? Send your general letters to **Ezra Surf's Postbag (ESP)** at the address below

COMPETITIONS

Enter competitions using the details on the form. If you have any queries contact **Jonathon Maddock** on **0625 878888**

PUBLIC DOMAIN SUBMISSIONS

PD libraries are welcome to submit their latest releases. Submissions should include a detailed list of what each disk contains. Jiffy bags to **Stevie Kennedy**

ALMANAC

Our Almanac authors can be contacted via *Amiga Computing*. Please mark any correspondence clearly and send it to the address below

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If you have had a problem with one of our advertisers please contact **Barbara Newall** on 0625 878888 or write to her at the address below

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THE WORKSTATION

Technical enquries about the Workstation should be sent IN WRITING to **WorkStation Support** at the address below. Please return faulty disks to the supplier

COMMENTS

If you have a nay comments about the editorial content of *Amiga Computing* please write to the Editor, **Stevie Kennedy** at the address below

TELEPHONE CALLS

Except in the situations listed above we **cannot accept telephone enquiries.** Please write in to one of the departments listed in this panel

SAVE THOSE SAEs!

Please don't send us SAEs, we can't promise to reply to every letter so it really is a waste of your stamp. Sorry!

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utilities

U054 BUSINESS CARD MAKER – Very useful utility.
U089 FLEXIBASE – Brilliantly versatile database.
U241 FONTS/LOGOS – Masses for use with D-Paint.
U006 BUSINESS PACK (3 DISKS) – W/Processor, spreadsheet + database.
U058 NORTH C – Find out about C-Compiling.
U237 PROFESSIONAL DEMO MAKER – Create your own demo masterpieces.
U070 SLIDESHOW MAKER – Shows how to present pics in different ways.
U084 SPEECH TOY – Get your Amiga talking.
U094 UEDIT – Best text editor in P.D.
U297 SOUND WORKSHOP – Essential utils for use with soundtracker type progs.
U299 SCENE GENERATOR – Create landscapes with fractals
U281 MED V3.1 – Get creative with your samples.
U312 MANDLEBROTS – The best Mandlebrot disk around.
U313 AQUARIUM – Find out whats on Fish Disks (1-470).
U286 HOUSE SAMPLES (2 DISKS) – All you ravers get these now – sound!
U314 THE FINAL FRONTIER (2 DISKS) – Magazine giving info + lots more on Star Trek – very good.
U315 ULTIMATE ICONS – Includes Icon Lab, Icon Master & Icon Meister – splendid disk.
U317 HOME BUSINESS PACK 2 – Keep your bank account in order.
U318 SYSTEM TEST DISK – Find out whats wrong with your Amiga.
U319 SOUND TRACKER SAMPLES (4 DISKS) – Crammed with over 300 samples.
U321 SUPA FONTS – Masses of them for use with D-Paint etc.
U322 SUPER KILLERS – Totally eradicate those viruses – mega disk!
U324 HARD DISK UTILS – Useful utils with full documents for hard drives.
U326 AMIGAFOX – The first DTP package to emerge in P.D.
U328 SOZOBAN 'C' COMPILER – The most comprehensive disk on C yet.
U329 TURBO IMPLODER V4.0 – Very powerful cruncher.
U330 FILM SAMPLES – Very imaginative set of 56 samples.
U331 LAND BUILD 3.2 – Generate landscapes and view from any angle. Totally amazing!
U336 PRINTER DRIVER PACK – Caters for around 50 printers.
U337 QUICKBENCH PLUS – Speed things up on your A500 plus

new utilities

U340 POOLS CHECKER – Find out if you've won a fortune.
U341 SAMPLE MAKER V1.0 – Create your own samples – Excellent.
U343 CHESS TUTOR – Become the next Karpov.
U344 IQ TESTER – See if you are as thick as everyone makes out.
U345 ASSASINS LABEL PRINTERS – Smarten up your disk library.
U346 ULTRAPAINT – Fab paint package.
U347 AMICASH – Get your accounts in order.
+U348 CLIPART (10 disks) – Comprehensive Clipart selection.
+U349 FIRM DEMO CREATOR – Beginners can now create demos.
+U350 DIRECT ANIM – Create some brilliant anims.
U351 SCULPT OBJECTS – Have fun messing around with Ray Traced objects.
+U352 COMMS UTILITIES (3 Disks) – Great collection of utilities.
+U353 MODEMS – Access, Handshake, Ncomm, Psionlink & loads more
U354 BEGINNER BENCH – Pull down menus.
+U355 600 BUSINESS LETTERS – Can be loaded into text editors and word processors.

The following utilities have been reviewed and given 80% or over:

U356 MESSY SID – Transfer files to and from Amiga disks and to PC as well.
U357 SID V1.6 – Makes all file operations quick and simple.
U358 SUPER C – Masses of CLI utilities – Excellent.
U359 IMAGELAB – Allows you to edit your art masterpieces.
U360 WINDOWS BENCH – Not just a pretty workbench replacement but very useful utilities incorporated.
U361 DEAFLAB – Converts text messages to sign language.
U362 ARTM – View inner workings of Amigas excellent system.
U363 MACKIE – CLI macro utility with great versatility.
U364 SCREEN MOD – Customise the way programs and screens appear.
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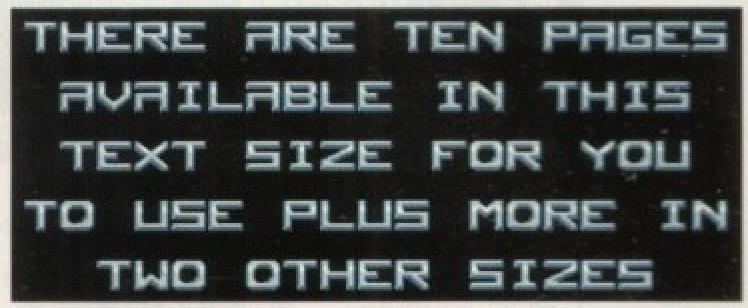
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Take the credits



Demo makers can be much more than just a bit of fun. Serge Golikov shows how to use the Red Sector Demo Maker as a powerful desktop video tool



Ever since the sound of the first "boing" reverberated and the juggler went through his routine, thousands of starry-eyed Amiga owners around the world have drooled at the prospect of creating mega demos of their own.

However, many may not realise that Red Sector International's Demo Maker can serve as a powerful graphics tool for desktop video applications such as titling, corporate image logos, movie credit sequences and so on.

The only thing necessary for making the transition from a desktop presentation mentality to a desktop video approach is some lateral thinking in the application of the program's capabilities.

What we need to do, in effect, is slow down a galloping graphics workhorse to a more pedestrian pace. The hardware requirements are no different to any other desktop video titling package – except for the audio, if you plan to record that pulsating rap beat.

More on the hardware requirements later – for now let's have a quick overview of the RSIDM's features to see which of these we can utilise for our needs.

Features

Demos are assembled into a sequence of patterns, with each pattern being a standalone graphics routine capable of displaying text, animated objects, colour background scrolls etc, or any combination of the above selected by the user.

To use the Demo Maker as a character generator we simply isolate those patterns which display text. The Preferences List in the main menu holds the various items where text can be entered and edited. These include the top and bottom scrollers, the sine text scroller and the text screens for the three font sizes.

Text is entered by moving the flashing cursor line onto the item to be edited and selecting edit on the top command line. The Help key toggles insert mode, while pressing Enter returns you to the main menu. In the Pattern Editor, text is entered directly into the Zoom Text pattern and the Textline patterns for each of the three font sizes.

The Textscreen patterns for each font size however, use the numbered and pre-edited textscreen items from the preferences list, of which there are ten for each font size.

Because a picture is still worth a thousand words and an example is easier to follow, load up the tutorial demo on this month's CoverDisk to see how it was constructed. Load it into the RSIDM as a short under Titles Demo and run it a couple of times to get a feel.

Then, examine the preferences list, select items which are highlighted in green and check their contents by clicking on Edit. Text areas will reveal how much can be entered and the optimum layout. Next go into the Pattern Editor to see which patterns were used and in which order. "Test" each pattern to see which parameters were selected for its execution.

Try tweaking some of the parameters such as Mode to see how it changes the way the pattern runs. The Little and Big Logo patterns let you create your own custom graphics in the form of IFF brushes which you can create in Deluxe Paint or even part of a digitised picture provided it has the right resolution and dimensions.

When cutting brushes to be used as logos, use the Co-ordinates option in DPaint, as the sizes must be pixel perfect. Specifically they are 320 x 158 and 320 x 54 for big and small logos respectively. The screen mode must be lo-res 16 colour with overscan set to standard.

Logo patterns

By using the logo patterns you can have multiple fonts at once, thereby overcoming the limitation of only one font being memory resident for each font size.

Now that you've seen the Tute demo a couple of times, let's look at it in closer detail. It starts with a restrained amount of razzamatazz – from an overwhelming choice of possibilities – in the form of the zoom text and sine scroller for the opening sequence.

This is consistent with a typical style which might be used for the start of a program or title sequence. It then proceeds at an even pace with conventional-style of presentation of the facts and continues so until examples of some specific techniques are offered – all taming this graphical beast to best serve our special needs. Of course you can make your own titles as fancy as you like – the program is more than capable. The intention of this article, however, is to focus on producing conventional titles using a very unconventional program – a fact which can be far from obvious while being dazzled by a spectacular demo complete with stereo soundtrack.

As for the hardware requirements, the humble RF modulator will let you record your titles directly off an A500 or 2000 onto your VCR. Simply connect the video out of the modulator to the video in on your VCR and switch the input selector to external.

If you are fortunate enough to have access to a genlock, you will know the required connections which will let you superimpose the titles over a live video background.

That's it – the rest is up to your imagination. May your creative juices flow, and let the credits roll.

AC

For more information on RSI Demo Maker, phone UGA Software on (01031) 3404 53531.

Saving your presentations

Once you have created your title sequence or demo, you can save it in one of three ways – Save Final, Save Bootintro or Save Short, with each option offering distinct advantages for different applications.

The first option allows you to access the completed demo from the CLI or Workbench if an icon is first created using a suitable utility. This makes it possible to compile special disks with different types of sequences, or to link several sequences to form longer ones by pause editing the tape or similarly, using greater variety of fonts and logos than are normally possible within the Preferences list.

Saving with the Bootintro option will create a self-booting disk where your sequence will play automatically after loading. This option has the obvious advantage of not having to load the host program or Workbench first, thereby saving time and memory but even more importantly allowing you to quickly "plug in" special sequence disks such as your own personal production logo or end credits, so you can "top and tail" your productions.

The third option, or saving as a short, lets you reload your sequence into the Demo Maker for further editing, changing certain presets such as fonts, logos and music, and creating template sequences. That way blank template sequences can be loaded with all the preset items already present in the preferences list, ready for your next work session.

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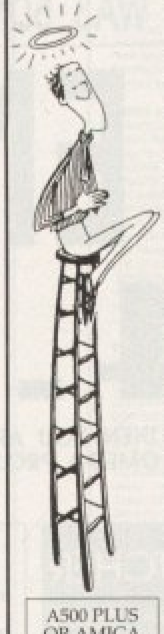
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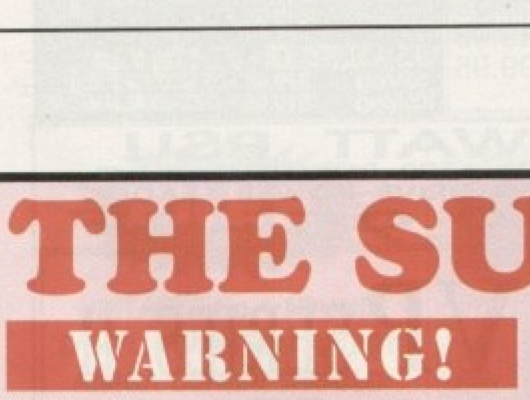
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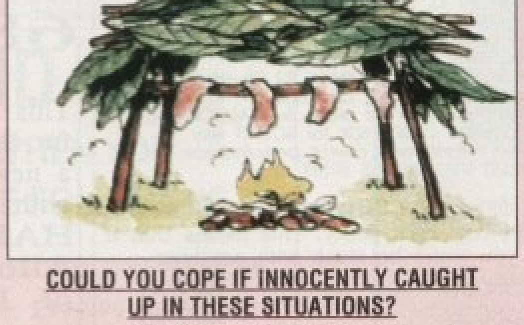
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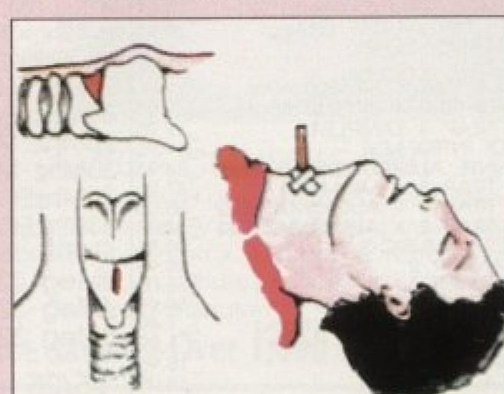


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ROM problems

I have a problem with my Commodore A2630 accelerator card and Workbench 2. All I get on power-up is a message onscreen saying "A2630 Monitor 7M" and a question mark on the line below. What am I to type in?

I spoke to FCC of Leeds, from whom I purchased the 2.04 ROM. They were unable to help but offered me a full refund on my sharer and 2.04 ROM.

I then spoke to Commodore and was told that I should speak to my dealer about the problem, but as the dealer who supplied the card went bust some time ago, I was stuck.

I told this to Commodore and they suggested I write to the technical support department in Milton Keynes. Ha...ha...ha... I wrote to tech support on another matter in December 1991 and have heard nothing from them since.

I finally found out about the compatibility problem from Silica Systems who have offered to upgrade the ROMs on the A2630 free of charge.

All I can say to Commodore is thank God there are good dealers around willing to help people who have bought the best machine in the world, and are treated like dirt by Commodore after spending thousands of pounds on their products.

Terry Williams, Harrow

As you have just found out, the A2630's original ROM chips, used among other things for shadowing Kickstart to 32-bit RAM, are incompatible with the new operating system. Commodore have upgraded the ROMs for this product, and the new version 7 chips enable the board to function perfectly with Kickstart.

You seem to have sorted out the problem, thanks again to helpful third-party dealers, but your plight highlights a sad weakness in the way Commodore "supports" the Amiga range. Relying on dealers for third-party technical support is a good idea as long as the dealer network is developed and of a high standard.

However, as Amigas are sold by every box-shifter under the sun as well as the more reputable companies, many thousands of owners find themselves in a position similar to your own every month.

This is as good an argument as I can think of for a proper end-user telephone support service. If companies like Electronic Arts can offer this for games players, why can't Commodore do the same for all Amiga users?

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Upgrade worries

About six months ago, I bought an Amiga 1500 with Kickstart 1.3 and recently heard that the machine is now being shipped as the A1500 Plus, complete with version 2.04 and the ECS chips.

As Kickstart ROMs and ECS chips are available, and being interested in programming, I have decided to buy the new chips to upgrade my Amiga but would like a few answers before I do.

1. Does the Kickstart 2.04 chip come with manuals and Workbench disks?

2. Can I fit the chips myself? I know this will invalidate my warranty, but will it involve soldering and do they come with fitting instructions?

3. To fit the new chips, will I have to buy extra boards or do they just slot into the motherboard in place of my old chips?

4. How many RAM boards are there which are compatible with the new Super Agnus chip?

K B Sekhon, Heston

As long as you buy the official upgrade pack from a Commodore dealer, you should receive manuals, disks, the new ROM chip, and fitting instructions.

This will cost a ridiculous £80, but if you wimp out and go for the £40 Kickstart chip alone, you'll have no Workbench 2.04 disks or manuals.

Fitting the Kickstart chip is quite easy. You just open the machine, prise out the old chip with a screwdriver, and slot the new one in its place. No soldering is required.

There are no ordinary RAM boards which will take advantage of the Super Agnus chip, because unlike the Kickstart and Denise chips, you can't just replace your old Agnus with a Super Agnus. The motherboards on non-Plus machines are incompatible with the new chip, even though it is the same size as the older Agnuses.

MegaChip 2000 – which will fit in any A1500/2000 – is the only board at present which will allow you to upgrade to 2Mb chip RAM. It fits in a standard Zorro slot and comes with the extra memory and a Super Agnus chip installed. It will cost you a hefty £199, so you'll have to be desperate for more chip RAM.

Quirky Quantum

I recently fitted a Quantum 52Mb replacement drive in my A590 case and although everything is working OK, I would be extremely grateful if you could answer the following questions:

1. In my ignorance the first thing I did was a low level format using HDToolBox and then initialised the disk. I have since been told that this will slow the drive down. Is this correct and if so can I do anything about it? In any case, is the speed not restricted by the A590 controller card?

2. I use the KCS Powerboard and when booting up the software it kept asking me to low format the drive or press Esc to continue. Again in my ignorance I took this to mean that the drive needed low level formatting and did so. Strangely, all the data on the hard drive remained intact, but the software no longer prompts for a low level format. Why?

3. The PC program CheckIt states that the transfer rate is 674Kb per second, which is far lower than the 2Mb quoted in the drive specifications, so I am concerned I may have done something wrong.

Finally, I read Mr Ankin's letter in the April edition and would like to spring to Diamond Computers' defence. Over the last couple of years they have been pacemakers with their pricing policy. I frequently use them and on the whole find their backup service satisfactory.

I think the problem lies with their sales staff who, I agree, promise to return calls and don't, but whenever I have dealt with their technical engineers I have found them extremely helpful.

S Morley, Harpenden

Low level formatting should be carried out once on a hard drive and it shouldn't need to be done again. Most hard drives will have already been formatted at the factory, which means you need only prep and partition them.

There is no possibility of this actually slowing down your Quantum, as it wouldn't work unless you formatted it! As you rightly point out, speed of access and transfer rates are dictated partly by the drive mechanism, but more by the controller board.

In your case, the speed of the Quantum will be affected by the relatively slow A590 controller, which is why you are achieving transfer rates of only 674Kb per second.

Ignore the "best case" 2Mb transfer speed, as this is just the manufacturer's estimate of the mechanism's physical limits. In practice, the fastest A500 hard drive, GVP's Impact Series II, will transfer data at about 1.05Mb per second.

The PC software seems to have assumed that you are booting from a hard drive or wish to use a hard drive as your boot partition. In this case, the KCS software would like to prep and format a partition of its own, thus the

request to low format the drive. As the data survived, which it should never do when a drive is formatted, I can only assume the low level format in question never took place.

Dead Amiga?

Last June I purchased an Amiga 500 with 1Mb memory. In addition, there is an A590 hard drive which the Amiga refuses to access. It either informs me of a guru, tells me to check my hardware, or asks for Workbench disk to be inserted.

The A590 does not seem to interface properly. There's a quarter-inch gap between it and the Amiga which I've tried for hours to reduce, but can't. Also, my Star LC-200 printer will not work. Is it incompatible? The shop refuses even to allow me to take my equipment along and have it checked out, so I'm getting desperate.

S G Potton, Upminster

It sounds as if your A590 has not been formatted or prepped. Try booting from your A590 setup disk and use the HDToolBox utility to go through the formatting procedure. If the drive still won't work after this, then there's something seriously wrong either with the A590 or the Amiga itself.

Don't worry about the small gap between the Amiga and the A590. As long as the edge connector has been slotted in correctly, it doesn't matter if there's a slight gap – you'll find this happens with all hard drives which fit in the DMA port.

The Star LC-200 printer should be completely compatible with the Amiga as long as you have the correct printer leads. Check with your local dealer if you are in doubt about the lead.

By the sound of it the shop you bought the Amiga from is less than helpful, but if the machine is less than one year old you have a right to free repairs under your Commodore warranty. Remind the shop of this, and if they still won't help you, report them to Commodore and send your machine to the national repair centre (FMG).

Productive Denise

Thank you for a great mag, especially the Almanac DTP column. I just have a couple of questions.

Can you tell me the address for George Thompson Services? There was a wonderful article in the April issue about cheap fonts for PageStream, but the contact address was left out.

Secondly, I know that the new ECS Denise chip can use Productivity mode on a multi-scan monitor, but could the same monitor be used for lower resolutions?

I intend to add an accelerator board at some stage and won't have room inside an A500 for this and a video card. I know that this kind of expansion is fully possible with an A1500/2000, but I haven't got room for one of those machines. Vicious little circle, isn't it?

Shaun Pugh, Batley

George Thompson's address is Cucumber Hall Farm, Cucumber Lane, Essendon AL9 6JB and they can be reached by phone on 0707 664654. Sorry we neglected to supply it in the DTP article.

To use productivity mode with a multisync, you must ensure that the monitor will properly display the new mode. Commodore, predictably enough, recommend their own 1950 monitor, which is a good quality multi-sync, though a little expensive.

You can risk a cheap VGA monitor, but try to test it before paying for it, as productivity mode is not a standard VGA-style signal and may not perform well with cheaper monitors.

As long as the monitor is happy, and you have a cable which will connect its 9- or 15-pin input to the Amiga's 23-pin RGB socket, you should be able to use all Amiga modes with the multisync.

The display will probably be a bit sharper than your average Amiga monitor but you will, of course, still get flicker in interlace mode unless you have a flicker fixer.

More memory

I am thinking of upgrading my A500, but I am not sure if some upgrades will be compatible with the others. I am planning on a Virgo V1500 board to give me 1Mb of chip RAM and 1Mb of fast RAM. Will this board be compatible with the new Kickstart 2.04 chips I am thinking of getting?

I wouldn't like to think I'm wasting my money on one or the other. Please help.

Richard Turton, Retford

I have to confess I've never clapped eyes on a Virgo V1500, but it sounds like a perfectly ordinary 1.5Mb card with Gary connector and DIY solder job. As long as you install it properly, you should find little to worry about. Kickstart 2.04 should be happy to coexist with the new RAM board.

Confused startup

I have a query. When I turn on my A500 Plus and hold down both mouse buttons, a screen appears. Please can you explain what it is for and what it actually does?

Peter Hicks, St Albans

The startup menu screen activated by holding down both mouse buttons is of most use to users of auto-booting hard drives without game switches, as it allows you to stop a floppy or hard drive from booting, and gives you a choice of which drive to actually boot up from. If you don't have an extra floppy or a hard drive, just ignore this screen.

Duff driver?

I'm on the verge of destroying my printer, as it's been causing me no end of grief lately. I recently switched from using an old shareware text editor, called Uedit, to the Pen Pal wordprocessor, but I've not been able to print anything out.

It all started when the disk, which I ought from a friend, turned out to have a read/write error. There wasn't a backup, so we used FixDisk to sort it out and managed, through luck more than judgement, to get Pen Pal to boot up. However, all was not well.

When I finished my first letter and tried to print it, I got the "Can't find printer device" error message. Now, I think either my Amiga is going mad, or Pen Pal is corrupted, as I have selected the printer driver using preferences and there was no problem. Can Pen Pal have been damaged by the read/write error?

B Henson, Birmingham

It sounds to me as if one of the Workbench system files was wiped out by FixDisk when it sorted out your read/write error. You will probably find that port-handler (from the L: directory), parallel.device, or serial.device (both from DEVS:) have gone missing. Use Shell or TDM to track down the missing file and copy it across from your Workbench disk.

If Pen Pal had been corrupted, it wouldn't run at all, so you can rest assured you expensive software is safe.

Monitor mayhem

My monitor makes a very annoying high-pitched whine whenever I use it, and has recently become so bad that I've resorted to using the TV modulator rather than go mad. Is there anything I can do about it? The monitor is a Philips CM8833 Mk2 and is just out of warranty, so if there's a way of sorting it out without an expensive repair, I'd love to know what it is.

Also, when I use my internal drive for loading large files, it sometimes hangs up. When this happens, the drive light stays on, and the drive keeps cluncking away on the same part of the disk. Is it fritzed as well?

George Choi, Leighton Buzzard

Some people with very acute hearing in the high range can constantly hear the whining sound made by cathode ray tubes, but unless you get this with TVs and every other kind of CRT-based visual display, it's much more likely that your monitor is at fault.

You probably won't be able to do anything about it yourself, as from the sound of thinhs your tube is on its way out. To avoid sending the monitor to a computer repair shop, try lugging it down to your local TV repair man. He may not know much about monitors, but they're basically similar to TVs and he should be able to confirm which component is at fault.

As for the internal drive, the only solution is to replace it. Commodore's internal floppies are not the best in the world, though usually adequate, and many need to be replaced after only a year or so. The replacement will cost you about £45-£50, and will be available from many of our advertisers.

NTSC niggles

I wish to install Kickstart 2.04, but I have heard that some of the early A2000 machines won't accept the chip. Is this true? If so, is my A2000 one of these machines? I have a revision 4.4 A2000 which I purchased in America in 1988.

What is it that makes the Amiga PAL or NTSC? Do PAL and NTSC versions have a totally different motherboard, or is it only the display chips that differ? How can I change my system to PAL?

Nejdet Ayik, BAOR

There should be no problem installing the new Kickstart ROM in your old machine – the Kickstart chip socket is exactly the same size as in all the latest machines and will accept any Commodore Kickstart chips except the double-chip A3000 version of Kickstart.

The difference between a PAL and NTSC Amiga is in the Agnus and Denise display chips. Make sure you fit a Fatter Agnus, which will work in PAL or NTSC, and while you're at it buy the ECS Denise so that you can take advantage of Kickstart 2.04's new display modes. After that, you should be in full PAL mode.

GRAPHICSTATION SUPPORT

AC offer more hints, tips and assorted online advice for the power-packed GraphicStation

If you're anything like me, your first instinct on the arrival of any new toy is probably to rip open the packaging, toss the manual aside, and start pottering about looking for the interesting bits.

If that's exactly what you did when the GraphicStation dropped through your letter-box there's a strong chance you've probably overlooked one of the most powerful utilities on the disk.

PrintStudio is a fairly bland and minuscule window which hides a plethora of printing options that make the GraphicStation one of the most powerful printing environments in the business.

Before you delve into the utility itself, the first task is to add the printer driver of your choice. If there's one area that causes more problems than any other it's printers, both in their installation and operation. As a result, we'll go through the entire printer installation process step-by-step.

Boot up!

If we assume you've just booted the GraphicStation, either double click on the GraphicStation disk icon or alternately click once on the short-cut pull-down with the left mouse button, then expose the pull-downs themselves by holding down the right.

Either way, select the TDM icon or menu item and load up the aforesaid software. Once loaded, click on DF0 to load up the GraphicStation directory. Now double click on DEVS: followed by the printers directory. At this point you should see the EpsonX printer driver supplied with the disk.

If you use an alternative driver, delete the EpsonX file and copy your preferred driver into the drawer. If you're using a dual-drive system, this should be simplicity itself.

Simply click on the opposite directory window and load a disk containing the driver you require. Select the driver from the parent disk and copy it into the now empty printers drawer on the GraphicStation. If you're working with a single drive system, follow the same loading procedure for the disk containing the new drive, then click in the GraphicStation directory and select RAM. Now highlight the driver from the parent disk – a small arrow will appear alongside the file. Copy the driver into the RAM disk.

Replace the GraphicStation and move through the directory structure by double clicking on DEVS: and then printers, or alternatively click in the path window above the directory list and type:

```
df0:devs/printers
```

This simply speeds up the process by directing TDM straight to the necessary drawer on the disk.

Once in the correct spot, simply click in the opposite directory window displaying the contents of the RAM disk, select the driver and hit copy. The GraphicStation disk should now be complete with the correct driver, ready for configuration.

Now exit TDM and load PrintStudio. Click on the PrintStudio window to remove the information screen and select the preferences icon within.

The program will automatically load the standard Amiga preferences program. Once loaded, click on the printer icon which will reveal a secondary window.

You should now see either the original EpsonX driver or alternatively your latest addition plus the generic driver all waiting in the select window. To choose your new driver, simply highlight it using the arrow gadgets alongside the requester.

Once your driver and any other printer preferences are defined, click on Use to return to the main menu. If you are happy with all the other preferential options, click on Save and you'll be return to the PrintStudio interface.

Because of the usual space restriction imposed by a single page, it simply isn't possible to go into real depth concerning the program itself, so for the time being we'll have to make do with a brief guided tour, returning in later columns for a more in-depth look at the options on offer...

On the very top of the PrintStudio window you'll see the interface colour options, but perhaps more importantly, concealed between these two gadgets lies the system information drop-down which is revealed by clicking on the central title bar. This produces a small window which shows your available fast and chip RAM plus a running total of the two.



Below the title bar lurk the four main power gadgets. The first of these is the ILBM icon which allows you to load any IFF and print either the entire image or just selected parts. An additional screen gives complete control over the palette of the picture to be printed with options to convert to negative and to exchange foreground to background. The screen icon has a dual purpose. It not only allows the user to capture entire screens or individual windows which can then be saved to disk, but also provides an ideal way to capture graphics which can be feed into the ILBM element of the program for printing.



More options than you could shake a kebab at

As the name suggests, the Text gadget gives full control over the printing of text files – which incidentally can be written with the GraphicStation's own built-in text editor.

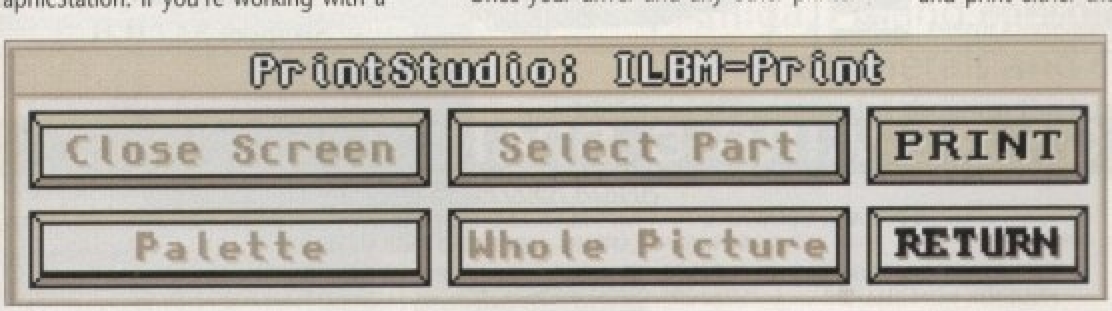
The Text printing options are many and varied, as a result we'll be devoting additional space to a full explanation during a later issue of the support column.

Finally we come to the Preferences option which we explored earlier. As this merely gives access to the standard Amiga preferences program, a detailed recount of its options isn't necessary.

If you require further assistance have a dig around and retrieve the Workbench manual which contains all the necessary information.

Don't forget to tune in next month for more info on the premier productivity program plus more in depth advice on PrintStudio.

AC



Choose your screen...



...then add a few touches of your own before printing

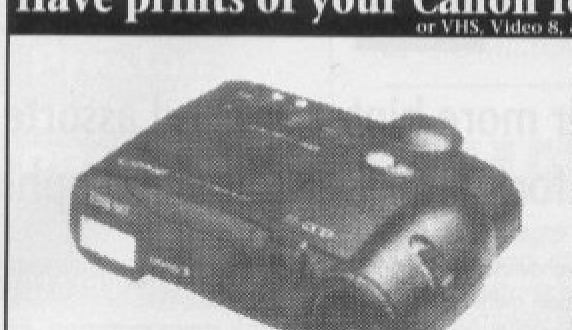
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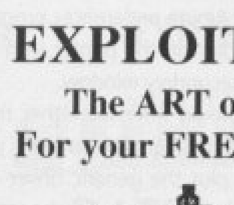
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amiga almanac

Unlock your

Alex Gian looks at graphics and intuition with ARexx, and predicts a bright future for the language

Having covered most of the bare-bones basics of ARexx, we now make a small diversion to look at a subject that will interest almost all new users of the language.

The Amiga's reputation is built on its graphics capabilities, its multitasking and its interface, and a newcomer is bound to ask: "How can I make use of these advanced features easily?"

One might have thought that the loading and saving of graphics, the use of file requesters and so on would be easily available from the system, but up to now this has not necessarily been the case.

While the Amiga's old utility language, AmigaBasic, did give access to some of these features, it offered an unfriendly and cranky interface. Many people turned to AMOS Basic, because of its excellent access to the Amiga's bells and whistles, but AMOS needs its own environment and does not multitask with the Intuition graphic user interface.

So, bizarrely, there has not really been an effective utility language for the Amiga – most users have relied on diverse PD utilities to perform their various management tasks.

It is here that ARexx comes into its own in a way that really shines, and which has not yet received the acclaim it deserves. By supporting the addition of limitless extension libraries, ARexx lets us create custom functions that will do the aforementioned jobs easily and cleanly.

For instance, functions to open a window or a screen, to display a graphic, create a menu or get a file requester might look something like OpenWindow(), OpenScreen(), DisplayPic(), MakeMenu() & GetRequester() – in other words, intuitive and easy to use, much as you would expect them to be.

A small library with features like these – rx_intui.library – is included on this month's CoverDisk. This library gives access to many Intuition functions and system functions, as well as the Basic-like peek() and poke(). Normally, functions like these are only available to programmers using assembler, C and their ilk.

Remember to install the library before use with the command:

```
rxlib rx_intui.library 0 -30 0
```

– you may even want to have it in your startup sequence. We use rx-intui in the example below to show how we can write a simple picture viewer in just a few lines. The reason it seems so simple is that the hard work has already been done by the author of the library.

It is therefore all the more remarkable that all the best ARexx support libraries are freely distributable, and more are appearing daily – this demonstrates the support that ARexx receives, and its true utility nature.

Of course, you will have to learn something of the workings of Intuition if you want to produce anything fancy, but for simple purposes, everything you need is already there.

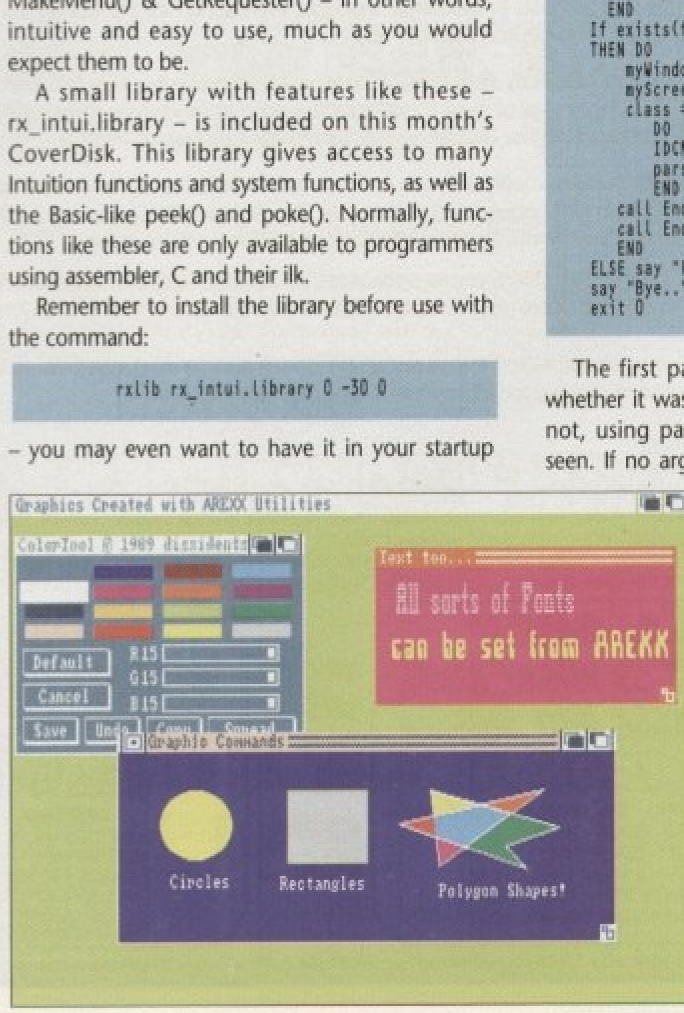
Let us look at the example now, which will recap some of what we have already seen, and also demonstrate the use of nested loops and If statements:

```
  /* Display.rexx   show an IFF-ILBM from ARexx */
arg filename
if arg()=0
   THEN DO
   say "Enter name of file to display.."
   parse pull filename
   END
  If exists(filename)
  THEN DO
     myWindow = IFFLoad(0,,filename)
     myScreen = Peek(myWindow,46,2)
     class = 1
        DO  UNTIL class = 3
        IDCMPmsg = WaitMsg(myWindow)
        parse var IDCMPmsg class p2 p3 p4
        END
    call EndWindow(myWindow)
    call EndScreen(myScreen)
    END
  ELSE say "File not found"
  say "Bye.."
  exit 0
```

The first part of the program merely checks whether it was run with an argument supplied or not, using parsing techniques we have already seen. If no argument was given, then the user is prompted to supply a file name.

You could also use a file-requester to do this, as we showed in the last issue. A check is made to ensure that the file exists, and its contents are then displayed with a simple function, in this case LoadIFF().

A useful feature is that



Colours, fonts and shapes come firmly under your control with ARexx

r Amiga's power

Interprocess communication

The usefulness of ARexx lies in two general directions. Firstly, in the extendability of the language via special libraries (and external command hosts – we saw this in the ClockDJ program, which provided us with a file-requester and window control) and secondly as a powerful automation tool for applications that need script control – for jobs that would otherwise have to be done manually. This is, of course, a generalisation, and there are wide overlaps.



Obviously, both elements of the equation are equally important, and it is their combination that gives ARexx its unique abilities.

Let us now look at some more programs that link ARexx and graphics, in order to get a better idea of what is possible.

RexxArpLib.library	**APIG.library**
FreeDraw	**RexxPlPlot**
CanDo	**Hyperbook**
ASDG Art Department	

The first, RexxArpLib, is a library similar to our own rx_intui, in that it allows easy access to Intuition features – despite its name! It started off as an interface to the ARP.library – a library that successfully replaced parts of AmigaDOS – but acquired many graphic features along the way.

It has been around for a while, and is quite popular. Unusually, it opens ARexx port for every graphics task, but once you get the hang of it, is very pleasant to use.

APIG – at least you won't forget the name – is another library with similar features, which also tries to cover some gaps left by RexxArpLib. As you can see, the user is spoiled for choice.

FreeDraw is an interesting example of how ARexx can transform a program. It began life as a simple drawing package that could do lines, squares and other simple tasks. As you can imagine, its practical real life value was limited.

However, it acquired an ARexx port when various programmers (particularly T Rokicki with minrexx) took advantage of its simplicity to show how a port could be attached to any program with a simple module. The resulting FreeDraw can now perform quite complex plotting routines via custom ARexx commands; the accompanying illustrations show this.

RexxPlPlot is another interesting case. It started off as a powerful library of plotting routines, with very high quality output, but it was only available for inclusion in C programs. With its ARexx interface it is now available to anyone.

Of course it does run a bit slower under ARexx, it needs to be learned, and if you want professional PostScript output you will need lots of memory. However anyone requiring an interactive professional quality plotting module will be more than pleased with it.

Next, we mention CanDo and Hyperbook. These are multimedia software authoring packages, both of which sport ARexx ports. Anyone who has used this kind of program will appreciate the ease that they bring into the creation of presentations.

CanDo is implemented as a command host, and since it has its own script language, is more likely to rely on ARexx for information about the system. Hyperbook, on the other hand, uses ARexx solely as its script language, and because it is implemented as a function host (ie all its operations are also ARexx functions) it can be controlled very easily, even from other programs.

Using powerful programs like this you can really let your creativity loose, without getting bogged down in messy coding details!

Finally, ASDG's Art Department is a powerful industry standard package which can perform a vast amount of graphic operations, including 24-bit work, and the conversion of almost any picture format ever devised. The fact that it proudly carries an ARexx interface only underlines that graphics and ARexx have a bright future together.

We will look at Amiga system programming with ARexx again in the future, but next time we will return to ARexx proper, to have a look at some important control features in the language as well as the excellent debugging and tracing facilities, which will be appreciated by beginners and old hands alike.

---

while the window and screen settings can be fully customised, they can also be left unspecified, in which case the function uses its own default values. These are quite adequate in most cases.

All necessary windows and so on will be dealt with automatically. This makes the function useful to beginners and more advanced programmers alike!

An average PD file viewer is over 20k in size, so you can see that the libraries are doing a lot of work to bring all that programming into just one line. Rx_intui.library actually calls a further library (ilbm.library) to handle display and saving, but this is invisible to the user. All you have to do is make sure that all necessary libraries are in your libs: drawer.

The other advantage of doing it this way, rather than using, say, a standard PD viewer, is that you can tailor it exactly to your needs. You can create a custom slide show, with the prompts that you want, and you can easily tie it in with other ARexx-compatible utilities.

For instance, you could edit the pictures as you go, perhaps "stamping" them with some information generated by the system. The next line in our listing uses the Peek() function to look at the window data (structure) in memory, and get the address of the screen on which our window has opened.

We will need this when we exit the program – we will then close the screen and leave everything behind us nice and tidy.

We'll look at the system structures in a later article, but for now all you need to know is that the address of a screen is 46 bytes into the window structure.

Next we have a loop that checks the messages sent by the system to the intuition windows when things like mouse clicks and keypresses occur. These are known as IDCMP (Intuition Direct Communication Message Port) messages.

Again we will go into no detail here – suffice it to say that the first part of the message sent when the mouse key is pressed has a value of three. The library documentation for the WaitMsg() function goes into more detail.

We use this loop so that we can break out of our picture viewing with a mouse click. Once we are out of the loop we use the rx_intui supplied functions EndWindow() and EndScreen() to give us back the memory we have used.



Graphics interfacing made easy

Well that's all there is to it! I know that it may initially appear daunting to beginners, but it really is one of the cleanest ways to go about this kind of work. Experienced programmers often turn to ARexx when designing prototype work, and leave the complex coding to the end, when the design has taken form.

Videophile rolls on

This month Paul Austin continues his tutorial on how to build up from the basics

In last month's column we went through the essentials needed to establish the nucleus of a home-based DTV setup. This month we'll continue in the same vein with a look at the additional hardware which can transform your first faltering steps into full-blown, stylish spectaculars.

As promised last month, our first port of call concerns a near essential element of any serious studio. The genlock comes second only to the Amiga – and, of course, the video – within any serious setup. As a result, it's well worth thinking long and hard about your investment.

To help you make such a big decision it's probably a good ideal to explain exactly what a genlock can offer, how it works and finally how to get the best from your investment.

The first job is to cut through the jargon and explain what your newest investment will actually offer. First, the word genlock is a concatenation of "general locking" – a tedious bit of trivia, but always handy as an ideal dinner party conversation stopper.

Achieving the results

More important aspects of a genlock concern how it achieves such impressive results. Basically there are three elements that make up any genlock. The first and most obvious feature is its ability to overlay, or key, computer-generated images over a video signal. Although impressive, this is perhaps the simplest part of the equation.

The really clever bit concerns the synchronising of the video and computer signals at sync pulse level. Without this ability, genlocking as a concept would be impossible.

The final element concerns coding, a process which converts the Amiga's RGB signal into a PAL composite or S-VHS signal, depending on your setup.

With these three elements in place, you have the essence of a genlock. Of course, more expensive units offer a whole range of additional whistles and bells which enhance the output and flexibility of the unit.

Nevertheless, for as little as £100, a basic genlock will provide all of the three elements which combine to produce impressive results.

Application

The actual application of a genlock remains a mystery to many, but really it's a very simple process. A common misconception is that genlocks "key" onto a specific colour. This is not the case, as the majority lock solely to colour zero in the Amiga's colour palette. Like all the registers in the Amiga's repertoire, it can be any colour you want it to be.

Because the genlock keys to a specific colour register rather than an actual colour, it's possible to have an entire palette made up of identical colours, with only the areas painted in colour zero displaying the keyed video image.

If for some strange reason you don't want the option to genlock but still require your art on video, a PAL encoder is the perfect alternative for anyone who needs to transfer their art onto tape.

Unlike a genlock, a PAL encoder has only one aim in life, that being to convert the RGB output of the Amiga into a high quality PAL VHS composite or S-VHS Y/C signal. The attraction of an encoder is that it provides the best possible Amiga to PAL conversion, but it does mean your art is restricted to Amiga only.

For animators this could be ideal, as live action video usually isn't required. An added bonus with many encoders is their built in expandability, with composite, Y/C and even Hi 8 outputs as standard, plus a built in audio through port. Unfortunately this is usually mono only.

A perfect example is the CP10 PAL encoder from Third Coast Technologies. It offers as good a PAL signal as you're are ever likely to need plus a full complement of the upgrading options as listed above – all yours for £150. Not bad value, as a glimpse at the price of similarly expandable genlocks will illustrate.

Genlock buyers' brief

With so many genlocks on the market it would be unfair to single out one or two as perfect buys. Nevertheless, there are a few pointers which should make your decision a little easier.

Obviously your choice may be restricted by available funds, but there are a few points to look for. First is an RGB through port. Not all bargain basement units have this option but it's an important addition which can save a lot of hassle during production – if you can manage the extra investment, it's well worth it.

If there's a choice, plump for a unit that employs sliders as opposed to knobs to achieve wipes and fades between the two signals. This isn't as important as a through port but it does minimise jerky transitions.

If possible, look for a unit that offers an invert option. You're only likely to find it on more recent releases but it's a handy addition allowing you to make colour zero the transparent element while all other colours form a mask.

Creating clear windows within a masked or semi-transparent background can really help to emphasise certain aspects within the image.

If you want more details on units, prices, performance and the like, look at last November's issue of *AC* for a complete roundup of the available hardware. Next month I'll be taking a look at Oxxi's excellent Presentation Master, detailing how best it can be incorporated into the average DTV setup.



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• Other video modes include MDA and CGA text and graphics. Also supports Tandy colour graphics adaptor and Hercules monochrome.

• EGA and VGA graphics can be displayed on a domestic TV or monitor. Unlike *real* PCs, no extra hardware is required.

Disk

• Up to four Amiga drives can be connected to your system and accessed in PC modes as 3.5" 720K or 5.25" 360K. Typical disk access is at least twice as fast as most real PC clones!

• DOS can be started from any mounted drive 5.25" or 3.5" and most Amiga hard drives.

• Supports most popular hard disks including GVP Impact, Supra and A590 (Omil and SCSI).

• A massive 200K ramdrive (up to 8Mb with expansion) is available in PC mode and it's PC-reset proof too.

Memory

• Even with a base Amiga 704K is free for DOS programs (640K in EGA and VGA modes).

• EMS (expanded memory) is supported allowing you to run Microsoft Windows without problems and store massive files in Lotus 1-2-3. So, if you have 8Mb on board, the PC can use it.

• XMS (extended memory) is supported – even though this is not usually possible on NEC V30 machines.

Speed

Its Landmark speed puts it way ahead of many true PC systems – it even compares favourably with many AT clones.

However, the crux of the matter lies with the video speed; and this, as many critics have noted is where the KCS Power PC Board scores over all others. It's no use having a wizz-bang processor if the screen takes several seconds to redraw itself.

• Tests in text modes have shown it is several times faster than evenAT clones with dedicated video hardware. Even in graphics modes, it's no slouch although the emulation is limited by Amiga hardware.

• Add a processor accelerator card, andthe 32-bit clean KCS cache software will use it to its full advantage.

Mouse

• Automatic serial mouse emulation is supplied as standard – using your existingAmiga rodent.

• Mouse can be configured as COM1 or COM2.

Joystick

• Up to two sticks can be employed at any time. You decide how they are arranged.

Printer

• Your Amiga's parallel port is accessed as LPT1 in PC mode.

Serial

• DOS usually supports two serial ports, but one is taken by the Amiga mouse. The Amiga's serial can be set as COM1 or COM2 as desired, ie for MODEM etc. up to 19200 baud full-duplex.

Sound

• PC sound is supported, but there's an additional volume control available in software.

Works on...

• All Amigas (except the a1000) fitted with Kickstart 1.2 and Workbench 1.2 or higher.

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"PC emulation is a contentious issue – but the KCS Power PC board is the only one to carry my personal recommendation. It is an excellent product that does all it claims and does it well."– *comments Mark Smiddy, co-author of Mastering AmigaDOS 2.*

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Get the picture

Margaret Stanger presents a full assembler version of a routine to read IFF picture files

Responding to queries by readers, I have now written a full assembler version of a routine to read an IFF picture file – the routine is available on this month's CoverDisk.

Interchange Format Files (or IFFs) are a convenient way of storing data in a way that any program can recognise. Usually the file starts with a group header. This has a group ID of four Ascii letters, the total file length, and then the ID of the type of file.

The picture files that I have come across are usually ILBM (interleaved bitmap) or ACBM (contiguous bitmap) but there could be others as well as files for music or text data. The file would consist of a series of chunks, starting with a chunk ID and chunk length followed by the chunk data. All chunks are read by the program. Chunks like DPPV and CRNG are ignored, but the following are processed:

BMHD	The bitmap header has the depth, width and height of the picture and the screen it came from, and a flag to indicate whether the data was compressed.
CMAP	This chunk contains a list of the colours used.
ABIT	This is the main data for an ACBM picture. The information is stored for a complete bit plane at a time.
BODY	Data for an ILBM file. The data for all the bitplanes of the first screen row is followed by similar data for the other rows. If there are a lot of bytes the same colour the data may be compressed to save disk space. The usual algorithm is to use a flag to indicate whether the next few bytes are to be read individually or cloned.

It is interesting to look at the data in a real IFF file to see how it is put together. Enter "type piccy opt h" for a look at the different chunks and their contents. A typical chunk header for a BMHD chunk of 20 bytes would look like:

```
42404844 00000014
```

Colour information would start:

```
43404150 00000030 00000000 600000A0 0000E000 A0804000
```

This would indicate 30 bytes of colour information starting with black (00 00 00), dark green (00 60 00), lighter green (00 A0 00), light green (00 E0 00) and camel or taupe (A0 80 40).

I wrote a general purpose file reader that could be accessed from any assembler source module. The picture filename, destination bitmap and colourlist vary, so they would be the input parameters for the routine. The routine "readfile" reads an ILBM or ACBM file where:

name	is the address of the filename
bitmap	is the address of the bitmap structure to be used assuming this bitmap is initialised and the rasters correctly allocated – the bitmap must allow enough screen memory for the picture!
colourlist	is a pointer to where the colours are to be stored, eg colourlist: ds.w 32 for 32 colours

The module assumes that the file is present, is ILBM or ACBM, and that the bitmap and colourlist are OK. When these conditions are met the module will read in the named picture file, unscramble it, put it in the chosen bitmap, and put its colours into your colourlist.

The module also assumes that there is enough memory for the compressed data while it is being decoded; this memory can be reused later. If memory is short, the module could be adapted with a smaller buffer to read in part of the data at a time. This would slow down the program – there would be more processing and disk access would be less efficient.

```
move.l  #filename,d0       ;in this case piccy
move.l  #BMscene,d1        ;initialised bitmap
move.l  #colourlist,d2     ;list for colours
jsr     readfile           ;read the iff file
```

The routine runs slightly faster than its C equivalent; a C programmer may want to resort to such a routine if picture files are to be read several times during a program run.

It is possible to call an assembler function from a C module by declaring the assembler function address as an external reference. Any values are returned via register d0.

If using any address registers other than a0 and a1, push the registers on to the stack at the beginning of the assembler routine, and pull them off at the end. C routines would put their input variables onto the stack, rather than into data registers, so the assembler routine would need to be adapted slightly when being called from a C program.

The demo program on the CoverDisk contains two source modules, pix.a and iffread2.a, which can be assembled and linked together in the normal way.

The object module, pix, clears the screen by blanking out the colours. The ILBM picture file, with the filename specified in the calling program, is opened and read. The BMHD chunk gives instructions on the dimensions of the picture, and the number of bitplanes and colours.

The colours from the CMAP are copied to the colourlist in the calling program. The picture data in the BODY chunk is read in, decoded, and copied to the bitplanes specified by the bitmap structure in the calling program. The file is closed, and control goes back to the main program.

The picture is displayed on the screen until the user presses the joystick Fire button, or clicks a mouse button. If you want to watch the operation in slow motion, comment out the first jsr _LVOLoadRGB4(a6) instruction in the main program.

Then you will see the current screen contents in the default colours while the picture is loading. Call the "wait" routine after each line – or even each plane to see how the picture is slowly built up.

Devpac macros

A macro is a small piece of frequently used code that is included in a source file when it is compiled. This macro is called in the source code, and included at compile time like a header file, so the source code can remain fairly compact.

The macro code is included in the object code every time the macro is called (unlike a call to a library routine) so there are no extra overheads at run time. Some extra memory is needed for object code, but this is usually offset by other advantages, especially on short macros.

The Devpac assembler has macros available for calling Amiga library routines. To take full advantage of these, use the following routine to open the DOS library:

```
move.l   #dosname,a1
moveq    #0,d0             any version
CALLEXEC OpenLibrary
tst.l    d0
beq          finished
move.l   d0,_DOSBase           save pointer
```

where space is reserved in the data section for each library pointer and library name.

```
_DOSBase:   dc.l   0
dosname:    DOSNAME
```

A call to the DOS library routine, Delay, would then take the form:

```
CALLDOS  Delay


move.l _DOSBase,a6
jsr    _LVODelay
```

The macro CALLDOS would save the contents of register a6, load a6 with the address in location _DOSBase, call the required DOS Library routine, and restore the original contents of a6.

It is the no longer necessary to declare each library routine as an external reference, but the header files exec/exec_lib.i, libraries/dos.i, and libraries/dos_lib.i need to be included.

The dance decade

Paul Austin examines a phenomenon that's spread from the rave scene and finally invaded the world of Amiga software

Audible plagiarism is big business in the music scene. As a consequence, it was only a matter of time before the sticky-fingered exploits of numerous producers and musicians made their way onto the Amiga.

Whether you agree with the practice or not, sampling other peoples' work is a fact of life and has become the norm rather than the exception.

The two latest floppy-based collections offer radically different approaches to the art of second-hand song compilation. The first comes from Time and Space and features edited sampled backbeat song sections rather than individual sounds.

The second selection of swag appears courtesy of Gajits' Music Software and arrives as a five-piece, floppy-based selection containing between 30 and 40 individual samples on each disk, all borrowed/pinched/lifted/blagged and generally leased on a permanent basis from a variety of the very latest state-of-the-art sequencers and modules.

We'll open with the dance-dedicated element of the duet. Zero-G comes hot from the all-nighter, bringing with it a selection of 72 edited samples universally know as Breakbeats.

The collection is derived from the personal collection of Ed Stratton – AKA Man Machine – who, according to the bumph, is a world renowned techno pioneer.

All the samples have been captured as IFF files at 16,726 cycles per second. As you might expect, this makes for very impressive results – it is, after all, roughly double the sampling rate for the average Amiga sample.

Where appropriate, loop points have been added making it possible to build an entire section or song around a single looping sample. The breaks themselves have been pre-edited to cycle perfectly. All you need do is glue the various elements together.

Aside from simple cycling repeats, some beats offer intro breaks with associated backbeats that continue on perfectly after the initial intro sample.

All the samples are tuned to middle C, so there should be very little editing required. Nevertheless, the accompanying manual offers advice on how to create or recreate looping samples, and how to combine a single intro sample with an infinitely repeating backbeat.

Advice

The tutorial goes on with further hints and tips on adjusting loop points and the creation of single instrument sustain loops. The entire tutorial section is based around AudioMaster III, but don't be put off if you're the proud owner of either Audition 4 or Intersound, as the advice is fairly general and should port over to other packages very easily.

Generally speaking, the Zero-G collection is excellent for dance fans but next to useless for anyone else. Having said that, there is a chance to do a little poaching of your own, as sounds can be isolated with a decent sample editor and lifted for latter use.

The sound quality and editing is very impressive, and the samples could easily slip back into the rave scene without anyone noticing their Amigan ancestry.

As mentioned earlier, Gajits' collection offers a slightly more purist approach to audible plagiarism. Rather than offering complete sections, they concentrate solely on individual sounds sampled directly from various unnamed sequencers and modules.

As a consequence, song construction is a little more long-winded but infinitely more original than its dance-orientated counterparts.

All the voice samples are recorded at 1,200 cycles per second, which at first glance appears inferior in comparison to the Zero-G collection. It's true that the quality at the ideal pitch isn't as good but this is negated by the added range which the slightly lower sampling rate provides.

The choice is a simple one. If a sample is taken at a high rate, its sound at perfect pitch is indeed better. But when high rate samples are moved up or down through the octave range they become distorted far quicker than samples recorded at a lower rate. As a result, there has to be a compromise when recording sounds which are to be played over numerous octaves.

Because percussion is generally used at or around perfect pitch, Gajits' have sampled all such sounds at 25,000 cycles, which even outstrips the impressive fidelity of the Zero-G collection.



For the true musos out there, this collection has to be the better choice of the two, especially if you want truly original results and don't mind putting a little more time into their creation.

Power players

If you consider yourself a serious dance devotee, the world of 8-bit sampling is probably well below your requirements. As a result, the CD-based version of the Zero-G collection could be ideal.

The complete three-CD set contains approximately 3,000 assorted samples covering the entire spectrum of modern dance music. All the sounds included are fully blown 16-bit replicas of the originals, with breaks, vocal hooks, special FXs, keyboard samples and just about everything else any would-be DJ or producer would ever need.

Perfect packages

All the programs listed below are ideal for handling Amiga-based samples. For the newcomer MED is perhaps the perfect choice.

It's not only cheap but boasts one of the best piano roll formats around while having the added bonus of a built-in, if slightly basic, sample editor in versions 3.00 and onwards.

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Frugal phoning

A great hobby it may be, but communications certainly eats up the pennies. Pat Winstanley looks at ways of avoiding that second mortgage

Last month we looked at bulletin boards and conferencing systems and ended with a warning about costs. But costs can be cut dramatically in a number of ways.

Although you should be able to find plenty of boards which are only a local call away, some of the more interesting ones are likely to be at the other end of the country, and long distance calls are expensive. If you think you'll be making lots of long distance calls, it's worth getting a Mercury account.

This alternative telephone system is now available from almost anywhere in the country, although some areas are still not covered. The system works on a PIN code basis. For about £8 per year you are issued with a personal code which is dialled before the normal telephone number. This puts you into the Mercury system and cuts BT out altogether.

Any calls made in this way are billed to you by Mercury so that theoretically you need only ever pay BT for their standing charges – line and equipment rental and so on. Mercury calls work out a good deal cheaper for all except local area calls and if you use the phone a lot, this can add up to a substantial saving.

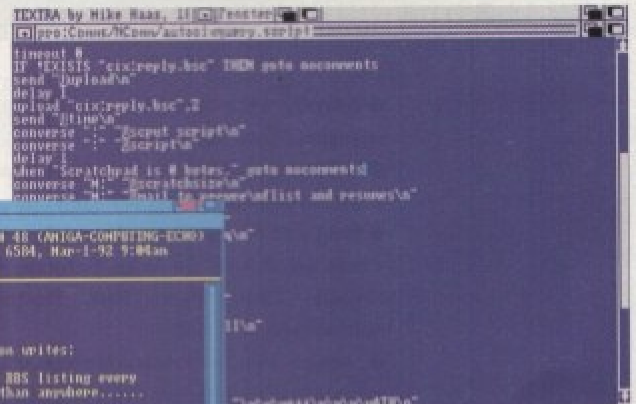
Another useful feature of Mercury is the option of allocating cost centre codes to the PIN. These two or three digit numbers are chosen by you and are a handy way of separating different types of calls when the bill comes in.

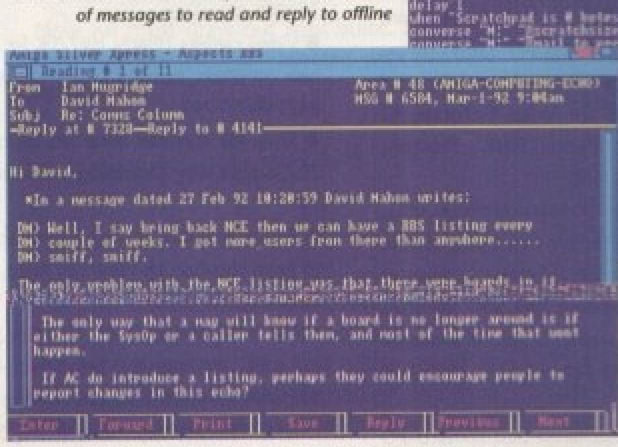
For instance, a different code could be allocated to each member of the family, plus one for each BBS you dial regularly. The bill is itemised with cost centres totalled separately.

One small problem with Mercury is that you might need to buy a new telephone to handle it. However, these need not be too expensive, and for around £30 you will be able to get hold of a spanking new phone with number storage facility which saves you from having to feed in a 10 to 20 digit code every time you dial.

More expensive models with built-in answering or even fax machines are also widely available but all you really need is a piece of apparatus capable of handling tone dialling.

This is part of the script I use when "blinking" on to CiX to grab all my unread messages and mail. It looks horrendously complex, but there's plenty of willing help on the comms network if you need it. A typical blink might take two or three minutes online for up to an hour's worth of messages to read and reply to offline





Here's a message grabbed from Aspects BBS via Amiga Silver Express and now being read offline. The message comes from the Amiga Computing Echo which is "echoed" on BBSs all over the country

There is a simple way to join chat sessions inexpensively, and here a high speed modem can be a great money-saver. Since reading and writing messages takes a lot of time, it makes sense to do so while not connected to the BBS, by means of an OLR (offline reader), such as OLR2, as found on the *Amiga Computing* CoverDisk a few months back.

This is simply a piece of software which will log on to a board automatically, find all the messages you haven't read yet, bundle and compress them and finally download the file to disk. When this is done, the OLR will log you off automatically.

Next, and in your own time with no charges ticking up, The OLR will allow you to read the messages in any order you wish and give you the opportunity to reply to interesting ones or make new messages of your own.

The next time you log on to the board, the OLR will upload your messages and place them in the system before downloading the next batch of unread messages. This method of working is called "blinking" and is a tremendous money-saver. In fact you shouldn't think of using any system regularly without investigating which OLRs are available on that board.

Shareware

Most OLR software is shareware, including the one I am currently evaluating. Amiga Silver Express is installed in my local board as a menu option. When I log on I can simply choose this option, decide which messages I want to capture, then download the compressed bundle created by the system.

Although this part of the operation is automatic, the logging on and off is not. This has to be handled by a script, which is rather like the start-up sequence used when you boot your Amiga. It is simply a list of instructions saying what to answer when the BBS offers various prompts. Setting up scripts demands quite a good knowledge of each BBS you wish to use, as each will present prompts and menus differently. This is easily handled by having a range of different scripts, one for each board, and a piece of comms software which can handle them.

The most widely used comms software on the Amiga is Ncomm, which handles scripts effortlessly and allows a phone book to be created to store both the telephone numbers of each BBS and all the settings, usernames and passwords required. Ncomm is available for download from most bulletin boards which offer files, and is well worth a look.

Speedy savings

An effective method of cutting costs, although very expensive initially, is to buy a faster modem. This may or may not be cost effective in the long run, depending upon your usage pattern and the sort of telephone line you have.

The biggest benefit from faster modems comes if you upload and download lots of files. Even though files are generally handled in compressed form, a full size game can take at least an hour to download with a relatively slow (1200 baud) modem.

The same file will squirt down the line in less than five minutes with one of the high speed modems now on the market. If you handle lots of files this can add up to a substantial saving on both your phone bill and any system bill from boards which charge by the hour.

If you are more interested in chatting on bulletin boards, a faster modem will not necessarily save you much money. After a certain point you reach the stage where the speed of data transfer is limited not by the modem but by your typing speed. It's no use having a high speed modem if all it's doing is sitting waiting for your fingers to catch up!

Again, many boards are quite slow in operation, taking some time to find and select the next menu you have chosen. Here the modem has to wait for the system rather than you. If you intend to spend a lot of your time online reading and writing messages, or chatting directly to the sysop (system operator) then you really don't need anything above 2,400 baud – more power will simply be wasted.

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Psychedelic scenery

Peter Hickman shows you how to hypnotise your relatives using just your Amiga... and a copy of Amos!

Your Amiga is blessed with a wonderful collection of 4,096 different colours. With these colours we can create new worlds and alternate realities with art packages like Deluxe Paint. With Amos we can go a step further and use the power of colour to produce animation.

Before we go into too much detail, it will help for you to know a little bit about the way colours are handled by the Amiga. Under ordinary circumstances you can display 32 individual colours onscreen. These are stored in colour registers. You can think of a colour register as being an empty paint pot, which we can fill up with any colour.

At its simplest form you can see colour cycling at fairgrounds and fancy Christmas displays. This happens when a string of unlit bulbs are switched on in sequence one at a time. This gives the illusion that a bulb is moving along. We can demonstrate this with a simple program.

The first step is to open up our screen, so go into the Amos editor and type:

```
Screen Open 0,320,200,16,Lowres
Flash Off
Cls 0
Curs Off
```

Now we must set up our palette. Remember that each of the numbers in the following line represent the "paint" that we are pouring into the paint pot (colour register).

The colour which we have poured into colour register number one – remember that the 32 different colour registers are labelled from 0 to 31 – is white ($FFF) and represents our bulb which is switched on:

```
Palette
$0,$FFF,$0,$0,$0,$0,$0,$0,$0,$0,$0,$0,$0,$0,$0,$0
```

Now we must draw our light-bulbs. Each one will use a different colour, selected with the PEN command:

```
Paper 0
For LOP=1 To 15
 Pen LOP
 Wait Vbl
 Print "0 ";
Next LOP
```

The final stage is to start the colour cycling up. We will do this using the Shift command, which uses four parameters. The first is the speed at which the colours will cycle, the second and third specify the start and end colour registers which will be cycled and the final parameter is for special effects – which we will not be using!

Just how does it work? Well, the Shift command will move the colour stored in register number 1 into register number 2, the colour in register 2 into register 3, 3 into 4, 4 into 5 etc. It's a bit like pouring the paint from one pot into another!

```
Shift Up 2,1,15,1
Direct
```

That's it. Simple, huh?

Another interesting use of colour cycling is to produce weird backgrounds for games and demos – or hypnotising friends and relatives!

In the next example we will draw a small block 16 x 16 pixels in size, grab it as a Bob and finally paste it all over the screen. Once again, our screen must be opened up, and a palette selected. In this case I have used shades of blue:

```
Screen Open 0,320,200,16,Lowres
Flash Off
Cls 0
Palette $0,$5,$6,$8,$9,$B,$C,$E,$F
```

Now we will read in the data – sorry, but there is quite a lot of it! – and draw it onto the screen:

```
For Y=0 To 15
 For X=0 To 15
  Read SPOT
   Ink SPOT
  Plot X,Y
 Next X
Next Y
```

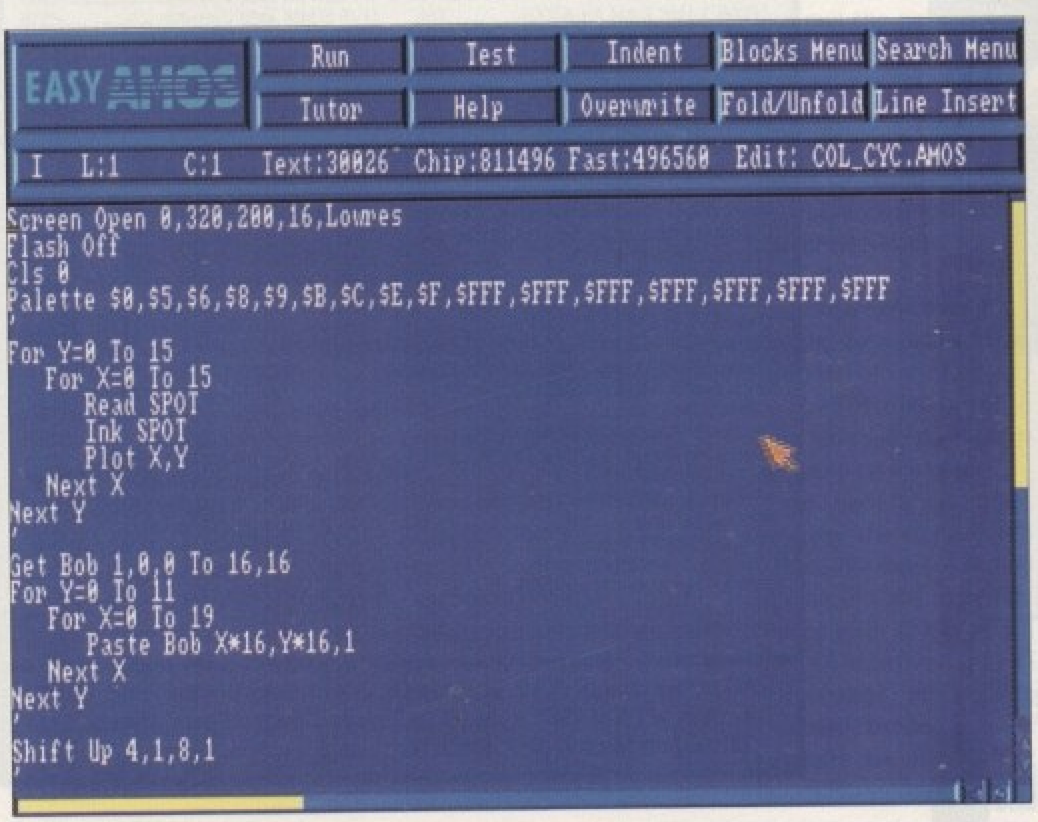
By using the Get Bob command we can grab this small block and stick it all over the screen, 20 blocks across and 12 blocks down:

```
Get Bob 1,0,0 To 16,16
For Y=0 To 11
 For X=0 To 19
  Paste Bob X*16,Y*16,1
 Next X
Next Y
```

We must now start that funky colour cycling! This time we will be cycling colours 1 to eight:

```
Shift Up 4,1,8,1
End
Data $1,$1,$1,$1,$1,$1,$1,$1,$1,$2,$3,$4,$5,$6,$7,$8
Data $1,$2,$2,$2,$2,$2,$2,$2,$1,$2,$3,$4,$5,$6,$7,$7
Data $1,$2,$3,$3,$3,$3,$3,$3,$1,$2,$3,$4,$5,$6,$6,$6
Data $1,$2,$3,$4,$4,$4,$4,$4,$1,$2,$3,$4,$5,$5,$5,$5
Data $1,$2,$3,$4,$5,$5,$5,$5,$1,$2,$3,$4,$4,$4,$4,$4
Data $1,$2,$3,$4,$5,$6,$6,$6,$1,$2,$3,$3,$3,$3,$3,$3
Data $1,$2,$3,$4,$5,$6,$7,$7,$1,$2,$2,$2,$2,$2,$2,$2
Data $1,$2,$3,$4,$5,$6,$7,$8,$1,$1,$1,$1,$1,$1,$1,$1
Data $1,$1,$1,$1,$1,$1,$1,$1,$8,$7,$6,$5,$4,$3,$2,$1
Data $2,$2,$2,$2,$2,$2,$2,$1,$7,$7,$6,$5,$4,$3,$2,$1
Data $3,$3,$3,$3,$3,$3,$2,$1,$6,$6,$6,$5,$4,$3,$2,$1
Data $4,$4,$4,$4,$4,$3,$2,$1,$5,$5,$5,$5,$4,$3,$2,$1
Data $5,$5,$5,$5,$4,$3,$2,$1,$4,$4,$4,$4,$4,$3,$2,$1
Data $6,$6,$6,$5,$4,$3,$2,$1,$3,$3,$3,$3,$3,$3,$2,$1
Data $7,$7,$6,$5,$4,$3,$2,$1,$2,$2,$2,$2,$2,$2,$2,$1
Data $8,$7,$6,$5,$4,$3,$2,$1,$1,$1,$1,$1,$1,$1,$1,$1
```

Have fun with colour cycling and send in any examples that you come up with.



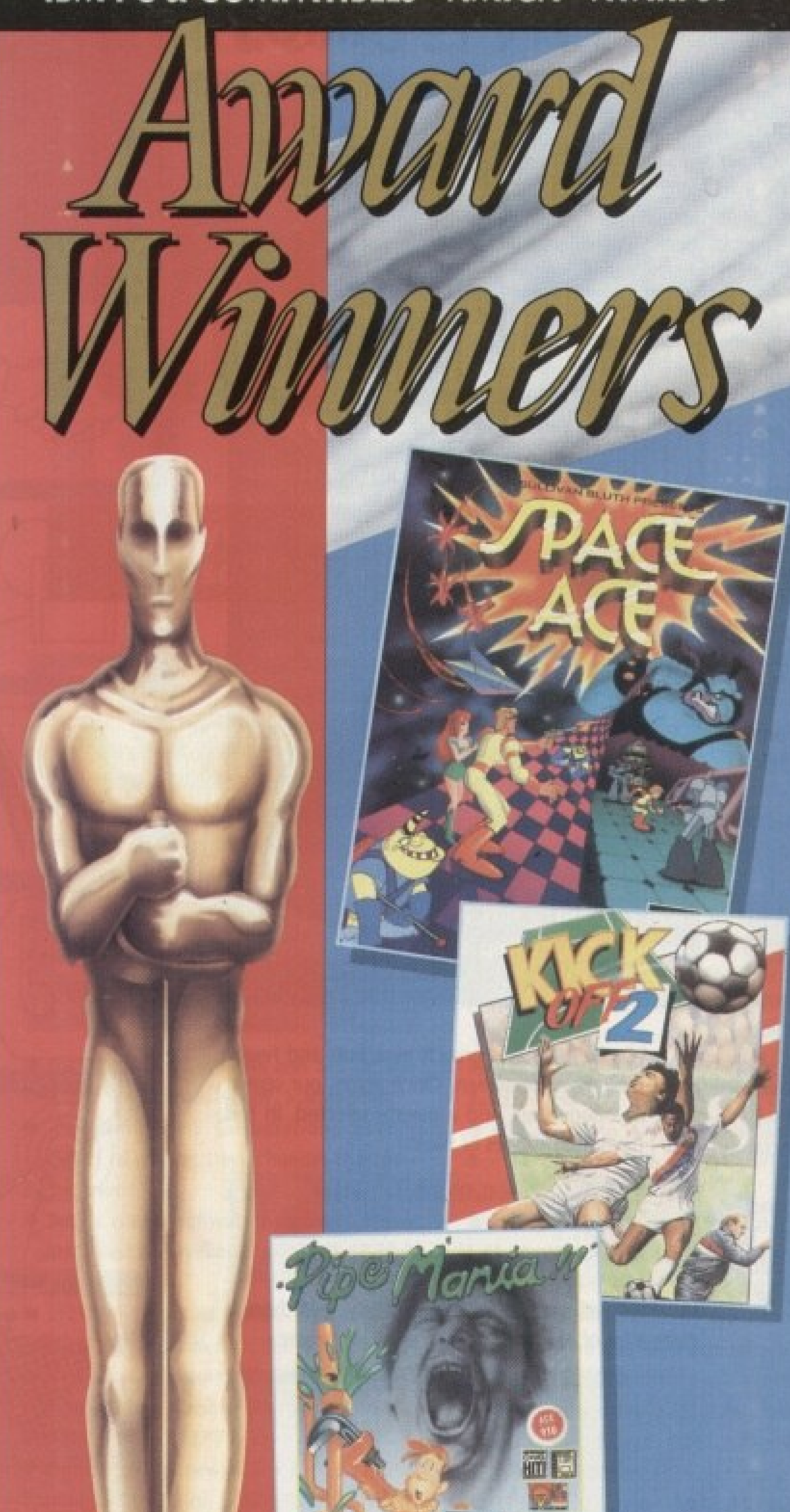
Practical Amos

We have seen how to create a simple Pacman-type game in Amos, but what's next? How about education!

An absolute wealth of educational software has appeared in shops and in public domain catalogues since the release of Amos. Many people who have good ideas but have been unable to implement them in traditional languages – like Amiga Basic – have found that Amos allows them to breathe life into their ideas.

In the next issue we will look at how to write a simple educational game using Amos. Who knows, you could go on to write something amazing using the ideas I will present – this is you chance to get ripped off by a top software company, so don't miss it!

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In the picture

In the first of two parts, Ben Pointer shows you how to achieve superior greyscale scanning

Practice makes perfect, the old saying goes. And as far as using greyscale hand scanners is concerned, the old saying rings true.

The quality of the resultant image will always depend on the quality of the original. The natural assumption here is that black-and-white photographs will always provide better greyscale scanned images than colour ones.

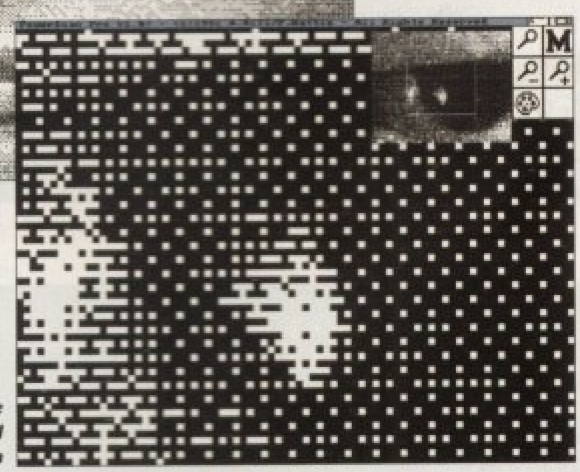
Not true.

What matters is contrast. A good quality, bright and colourful photograph – one taken in strong light, like bright sunlight or under photographic lamps – will scan perfectly well and in most cases will result in a better 16 greyshade image than the same image scanned from a black-and-white equivalent.

You should always use the scanner's halftone setting for scanning anything but line drawings, usually marked on the scanning head as the smallest of three dots. Ignore the two larger dots – on the whole these are a waste of time, although they can sometimes be used to get a better scan of a low contrast ("muddy") original.



The initial black-and-white dither pattern produced by the hand scanner is not a lot of use to you. Next month I'll cover how to convert it to an infinitely more useful greyscale image



Here you can see the individual black and white pixels of a scan

Preparation

Use the highest dots-per-inch setting available, usually 400 dpi, and to start with set the brightness wheel to the lightest setting.

In preparation for the scan, try to find a horizontal line on the original to line up with the front of the scanning head. I don't mean through the window, I mean in front of that – look over the front of the scanner and line its foremost edge up with something horizontal in the picture, preferably as near the top of it as possible – often this can be the actual top edge of the photograph.

Once the head is straight, start the software scan so that the green scanning light comes on, but before pressing the scanning button on the head, look through the window and push the head upwards slightly until the bar of light is positioned correctly across the top of the image to be scanned.

Sometimes this will result in the front of the scanner protruding over the top of the image, and when you start to pull the head it gets stuck on that leading edge of the paper. The solution is to place a clear sheet of plastic or acetate over the photograph or picture beforehand, or slip it inside one of those clear plastic A4 paper sleeves that stationers sell.

Always remember that a single, even pull is better than lots of very slow jerky pulls. The trick is not to put too much downwards pressure on the head.

You need to press down a bit or the roller underneath the head will stop rolling (it's this roller that keeps track of the length of the scan) and bits of the image will not be scanned, but the pressure should be light. The amount of downwards pressure you apply also affects the brightness of the scan because the more pressure you apply the less light gets in underneath the scanning head to add to the illumination of the picture, and therefore the amount of light reflected from it. Heavy pressure results in darker images.

Processing by hand

If you can't afford image processing software and want to get better printed output of muddy greyscale images, you can do it by hand if you have an art package and a little patience.

To adjust the brightness of an image, simply click on each colour in the palette and change its RGB value to the next lightest shade. So 0,0,0 (black) becomes 1,1,1; 1,1,1 becomes 2,2,2 and so on all the way up to 14,14,14 which becomes 15,15,15.

Keep in mind that each time you go through this process you turn one more shade of light grey into solid white, so the more you do it, the more detail gets lost. A better way is to leave black and white alone and drastically brighten the greys in between. Change both 1,1,1 and 2,2,2 to 8,8,8; change 3,3,3 and 4,4,4 to 9,9,9; change 5,5,5 and 6,6,6 to 10,10,10; and so on until the two greys before white are 14,14,14.

You might find it easier if you work backwards from white. Leave white alone, and then create pairs of greys one level of grey darker than the previous level, until you hit black, which you leave alone. The onscreen image will look a little wishy-washy, but the printed output will look much better than before.

Straight scanning

You'll find it easier to scan in straight lines if you use some sort of straight edge to run the head down when scanning. I find that the spine of a thick and heavy book is best, something like a telephone directory.

It needs to be heavy so that it won't slip if you accidentally lean against it a bit too much. Even then you may have difficulty keeping the head straight because the bit at the front that you push against the book is too narrow and might wobble about a bit.

The way to solve this is to use two heavy books, one either side of the head, forming a kind of valley down which to pull the scanner. If the books are heavy enough there's no way that the head can wander off line, so it's just a case of lining the books up correctly before scanning.



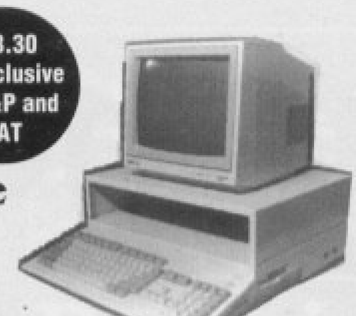
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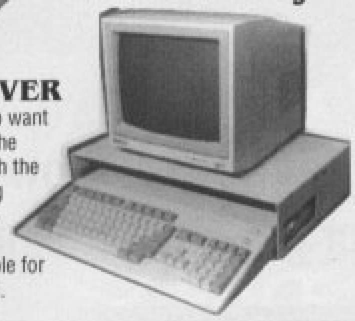
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Once bitten...

The Japanese are backing the Philips-developed CDTV rival, CD-I – but have they learned their lessons from Betamax video and MPX computers? Jolyon Ralph has his doubts

The Commodore CDTV is not the only interactive CD unit being aimed at the home market. Philips have had their CD-I interactive unit ready to launch for several years now. They have held back the launch in Europe awaiting the FMV (Full Motion Video) chips that would allow the CD-I unit to display moving VHS-quality video direct from CD.

These have not yet appeared at a cheap enough price to fit as standard, so the European CD-I players will come without the FMV chips, but with a socket to add this at a later date.

With manufacturers such as Philips, Sony, Matsushita, Sanyo and JVC bringing CD-I players to the market, does this spell the death of CDTV?

Firstly, let's compare the technical specifications of the two systems. The CD-I has a faster processor (16Mhz), and a larger colour palette. The CDTV has a standard 7Mhz 68000 chip and standard Amiga graphics modes, but it also has the Amiga custom chip set, which can make up for the speed difference between the two machines, and more.

Uniquely placed

CDTV is uniquely placed. The CD-I unit can cope very well with interactive multimedia-type applications, the Sega Megadrive-CD unit can play mean CD-ROM-based games, but only the CDTV can really perform well as both a home multimedia reference/education system, and a home entertainment system.

Games on the CD-I just don't cut it. The hardware is new and non-standard, so there are few programmers who really understand CD-I. CDTV is essentially an Amiga 500 with a CD-ROM drive, and there are thousands of good Amiga programmers out there ready to produce CDTV titles.

Initially Commodore tried to hide the fact that the CDTV contained a computer – now they are actively selling the machine on its expansion capabilities. The CD-I box can't be expanded into a computer., but by adding an inexpensive keyboard, mouse and disk drive to the CDTV you can use the machine as a standard Amiga.

The CDTV has Midi ports allowing the use of the new CD+MIDI audio disks (CD audio disks with Midi data encoded with the music) – the CD-I box doesn't. CDTV has an optional internal genlock, and with the recently announced AVM card it is possible to bring CDTV graphics up to and beyond CD-I quality, for an extra £50. This technology will almost certainly be built into future CDTVs.

The major problem with CD-I is not hardware, but software. A typical CD-I development system includes a Sun Sparcstation, emulator hardware, authoring system, tools and training, total cost around £44,000.

On CDTV the costs are far less, as there is already a large Amiga user base, and peripherals and software are very cheap. Several CDTV titles have been produced with very basic Amiga systems – an Amiga 500 with 100Mb hard drive and colour monitor – costing under £1,000, although it must be said that an A2000 or an A3000 is a far better system for CDTV development.

Lower costs

Because the costs are far less than on CD-I, there are far more companies developing for CDTV than for CD-I, and there are more titles currently available, despite CD-I having a three year lead on CDTV.

Philips are saying that some of their complex CD-I titles are taking 10,000 hours to test. At eight hours a day, that's five years!

Without the software CD-I is doomed. There may be a few high-quality titles out for CD-I, but without a large catalogue of titles the machines will not sell. Both Philips and Sony got their fingers burned in the home video market; they were beaten by the VHS format, not because their formats were any worse technically (Betamax was a far superior system to early VHS), but because most movies came out first on VHS.

And the combined strength of all the Japanese manufacturers together against Commodore isn't necessarily a one-way fight either. The Japanese tried to take on Commodore and Sinclair in the home computer market back in the early 1980s. They produced the MSX computer, which despite being a nice machine, with lots of different models, flopped in most of Europe because there just wasn't the software to go with it. The Spectrum and the Commodore 64 are still selling today.

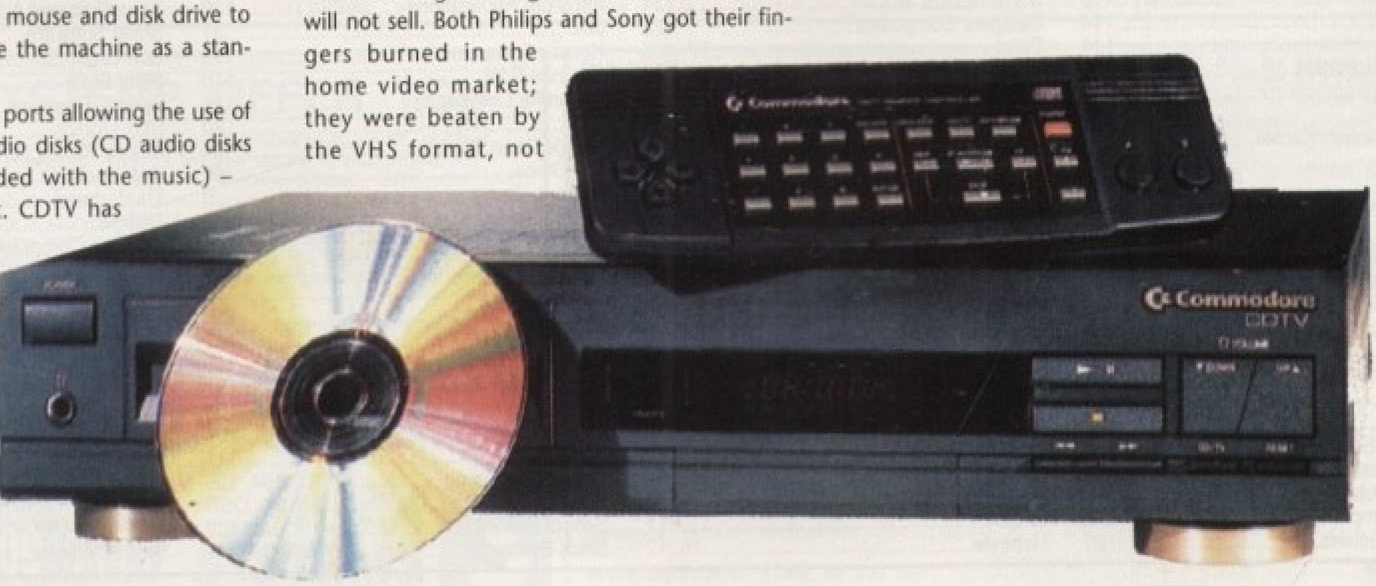
Sales of CD-I in the States have been very disappointing. Philips are banking on the European market to build CD-I, but without the software it hasn't got a chance.

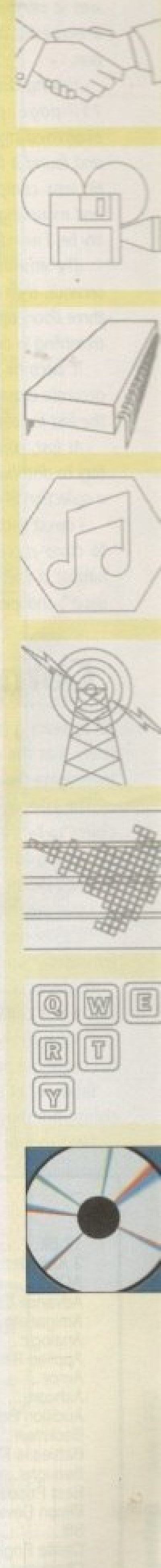
Kickstart 2.0 for CDTV

The CDTV is now coming fitted with Kickstart 2.0 as standard, at the new price of £499. Commodore initially told developers that machines would come fitted only with Kickstart 1.3, but recent CDTV purchasers have been pleasantly surprised to find that their machines have Kickstart 2.0 fitted.

There is not an easy way to tell whether a CDTV is fitted with a particular Kickstart version, except to boot from a Workbench floppy disk. The initial CDTV logo screen contains a small number on the granite slab. This is either 1.0 or 2.0.

This corresponds to the CDTV ROM version, not the Kickstart ROM. If the machine has a 1.0 CDTV ROM then it definitely has Kickstart 1.3 – if the machine has a 2.0 CDTV ROM, then it probably has Kickstart 2.0, but older models may still have the 1.3 Kickstart with the 2.0 CDTV ROM.





RCK lobster

Shopper shoots!

Have you seen the latest Amiga Flopper cover-mounted "freebie"? I noticed it on a shelf the other day and was so intrigued I had to take it home for a closer inspection.

Having disposed of the 150-page packaging, I examined my free "Tracer" and found it to be a clear plastic lens complete with crosshairs and mounting bracket. What could it possibly be, I wondered?

The answer to this question eluded me for 30 agonising seconds, then it hit me with the force of a phone book from three floors up, and the sheer audacity of the plan left me trembling in awe.

It became clear that, with its lens-like qualities and accurate crosshair, the tracer could be nothing other than the first instalment of a complete high velocity sniper's rifle!

At last, a new marketing ploy, the first attempt in history to distribute a valuable piece of weaponry disguised as a collection of worthless junk! Masterly!

I await with baited breath Fruitbat Publishing's attempt to cover-mount the barrel which must surely measure almost a metre in length. Look out for a "biggest ever issue", snoopers.

Barrel laughs as spring slump bites

The lower portions of barrels all over the Amiga community are showing signs of scrape damage as the traditional spring slump reduces the flow of new product releases to a trickle.

Magazines in particular are finding it hard to drum up decent stories, leading to some of the most appalling space-stuffing seen this side of *The Guardian*'s launch issue.

Not content with printing their gallery section twice (once in black and white, once in colour), hacks at the moribund *Virus User International* have recently resorted to extreme measures to cover up blatant attacks of waffle-itis, making even this crude page-filler look like serious Amiga journalism.

Witness poor Gary Fenton, whose article on the IV24 card was drowned at birth when the suppliers demanded its return before he'd even opened the box. The resulting page was so windy that a kindly art editor decided to set it against the most grotesque rainbow pattern he could muster, thus rendering the text unreadable.

The hapless Fenton was reduced for several days to pleading for compassion on the anorak-ridden CiX bulletin board. Better luck next time, Gary!

Commodore in practical joke shocker

An appealing (surely that should be appalling? – Ed) rumour has been sweeping the *Amiga Computing* offices lately that the entire Commodore UK organisation is no more than a huge practical joke. Lobster set out to investigate the rumour and tracked it to its source.

The joker in question, Brian Ferret, lives with his grandmother and three cats at a small farm in Dorset, and claims to be the originator of the Commodore "hoax". I asked him how he did it.

"Have you ever phoned Commodore with any sort of request? Yes? Ever noticed that they always ask you if you're a dealer, and when you say 'no' they hang up?"

I said yes, more or less, but what does that prove?

"It's just my answering machine linked to an Amiga with a few samples and randomised fob-offs thrown in for variety," smirked Brian in triumph.

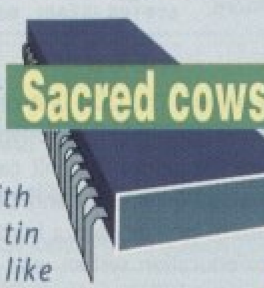
But what, I asked, about the human face of Commodore UK, the ever-present PR man, Andrew Ball? Surely you're not going to tell me he's just a practical joke?

"Not entirely. That one was done with mirrors and holographic projectors, and it was really tricky. Problem is, I never did perfect it, so that's why the whole thing's a bit light and insubstantial."

Brian Ferret is 33 and, of course, barking mad. I phoned Commodore to ask them for a reaction to Brian's claims, but they hung up when I said I wasn't a dealer...

Next month – does Brian really make A500s from melted down margarine tubs in his potting shed?

Sacred cows No 1: THE SILICON CHIP



Who could possibly find anything interesting to say about a piece of compressed dirt with lots of spindly tin legs, looking like nothing more than a cubist caterpillar with a penchant for dressing down?

The only people who find silicon chips interesting are the sort who collect TV on/off switches and can usually be found at even the busiest parties blinking owlishly from the middle of a pocket of silence and free floor space with a radius of approximately six feet.

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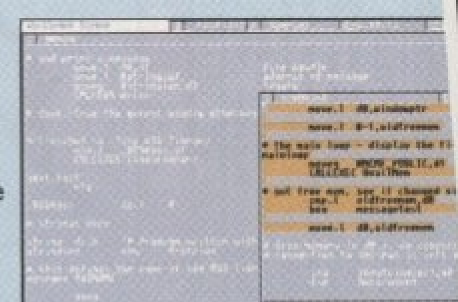
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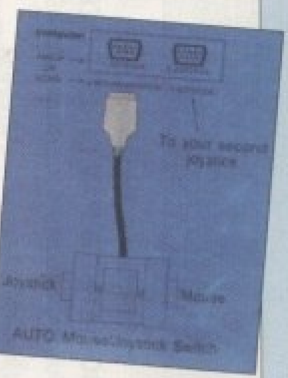
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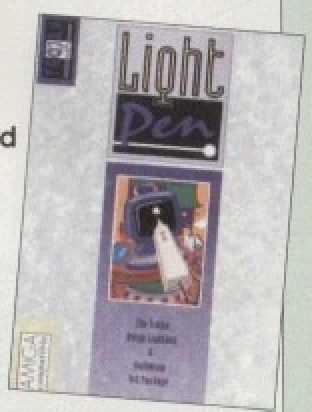


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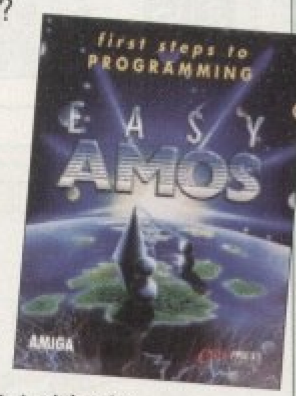
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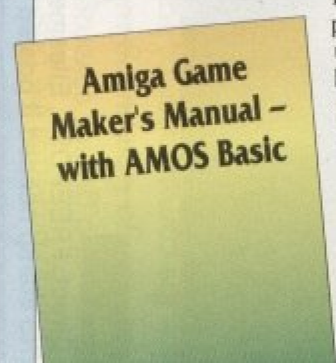
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by Stephen Hill

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This indispensable collection of utilities, including some outstanding shareware never before assembled together on one disk, is now available for just £3.50.

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The ability to design custom icons as standard is virtually unique to computers in the Amiga's class. The WorkStation turns your Amiga into a comprehensive design studio, providing a wide range of graphic tools that can make icon creation child's play.

The WorkStation has a fully configured dynamic recoverable ram drive which acts like an extra invisible drive to your Amiga. It's a vast improvement on the standard Amiga drive because it is very flexible and goes easy on memory.

Heart of The WorkStation is a powerful shareware package called SID. When you use it you can say goodbye to faceless blank screens and complex commands. Instead your mouse takes full control. Fiddle with files, display text and graphics, sample sounds, uncrunch archives... all this and more with just a click of a mouse button.

Code	Price
9958	£3.50

GRAPHIC STATION

PAINT! DESIGN! CONVERT! COMMUNICATE!



It's all so easy with

Only £4.50

THE GRAPHICSTATION

100% A500 PLUS COMPATIBLE



- **Artistic aspirations? Picturesque is colourful, so very easy to use and ideal for all kinds of artwork**



- **Transfer files to other formats. With your own GraphicStation you can instantly use graphics and text on other types of machines**
- **Create unique designer fonts. Make your own typefaces with FontMaster, and then add a shadow with ShadowMaker**
- **Trouble with sorting files and directories? The Directory Manager makes simple work of otherwise quite complex operations**

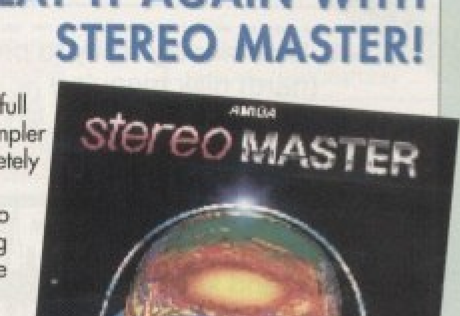


- **Want to stylise your user interface? With Huge you can create your own icons and click on your own works of art to make things happen on screen**
- **Creative printing. PrintStudio helps you print text, screen grabs and images created in ANY paint program, with instant fine-tuning all the way**

Code	Price
9876	£4.50

STEREO MASTER

PLAY IT AGAIN WITH STEREO MASTER!

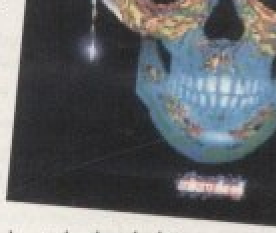


Stereo Master is the latest full feature STEREO sound sampler for the Amiga. This completely new hardware cartridge contains DUAL analogue to digital convertors, ensuring the ultimate in 8-bit sample quality.

The system can record in high quality stereo from its twin phono input sockets, sampling anything from a portable CD player to live radio!

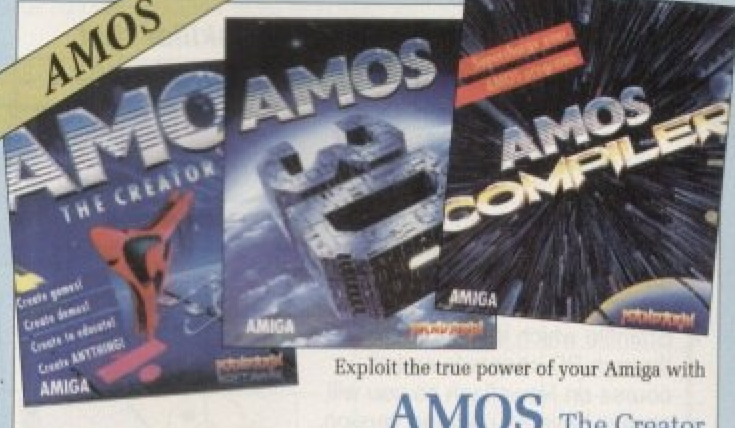
Stereo Master comes complete with powerful editing and special effects software which allows samples to be loaded in 8, 12 or even 16-bit resolutions.





Code	Price
9814	£34.95

AMOS



Exploit the true power of your Amiga with

AMOS The Creator

AMOS is the definitive programming language for everyone wanting to make the most of their Amiga.

AMOS is an extremely easy to learn and use package featuring literally hundreds of special commands to directly control the Amiga's legendary graphics and sound capability.

Just look at some of the things you can do:

- Define and control sprites
- Directly control the Amiga custom chips
- Write amazing arcade games
- Turn programs written in AMOS into fast and compact machine code simply by buying the AMOS compiler at a later date.

Over 40,000 Amiga enthusiasts are already pushing the Amiga to its limits – and beyond, with AMOS.

Now you can join them for only £34.99

Code	Product	Price
9834	AMOS The Creator	£34.99
9835	AMOS Compiler	£19.99
9836	AMOS 3D	£24.99
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AMIGA COMPUTING BARGAIN OFFERS

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Database Power for all Amiga Users

Features include:

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- Database structure to your own design, with field types such as text, number, date etc.
- Ability to modify database structure even after using the database.
- Powerful data entry, modification and deletion facilities.
- Full sorting and selection capabilities, plus full printing functions including the design of reports and listings.
- Database files are compatible with the PC version of Powerbase allowing interchange between the two systems.
- Works with all Amiga computers including and supports Kickstart 1.2 and 2.0.

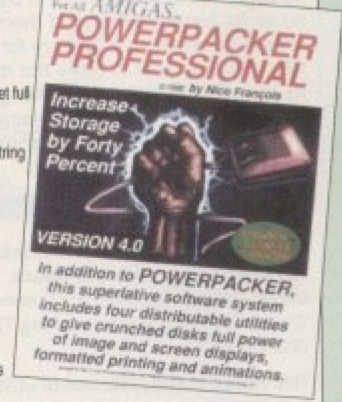
Powerbase has the facilities only found in sophisticated database systems, but is designed to be simple to use by anyone and is at a price that makes most other database packages look very expensive

Code	Price
9502	£19.95

POWERPACKER PROFESSIONAL V4.0

You can't pump up a disk, but with **POWERPACKER** you can compress its contents into less than two-thirds of the space otherwise required for storage - on a floppy disc or hard drive.

POWERPACKER uses sophisticated "crunching" algorithms to reduce the sizes of files, allowing and average of 40% more material to be stored on the medium of your choice.



POWERPACKed programs load, "auto-decrunch" and run.

POWERPACKER includes several freely distributable utilities which access packed files at the click of an icon, so you can get full and quick use of them without decrunching:

PPMORE A fully-pledged screen text reader with options for string search and sending an on-screen image to a graphics printer.

PPANIM Plays a crunched anim file. Tremendous savings possible for storing and playing your animations.

PPTYPE Formats a crunched text file to the printer, including pagination and perforation skips.

Plus **DECRUNCH,** a utility that restores files to original sizes.

POWERPACKER PROFESSIONAL © 1990 By Nico François

Features:

- **Make your files 70% smaller!**
  Crunch (compact) executable/datafiles and make your files to 70% smaller. With the help of the PPloadseg utility, which you can install on your (hard) disk, you now can even crunch libraries and devices.
- **Extra Powerpacker utilities**
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  PPshow >> Displays packed IFF pictures, PPanim >> Displays packed animations
- **Comes with 2 new libraries.**
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- **Crunchfactor even better than version 3.0b**
- **Detects Data or Command files.**
- **Special Kickstart 2.0 version Included**
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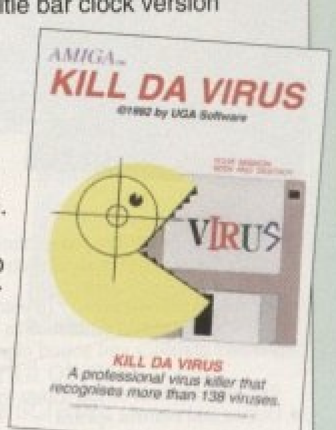
Code	Price
9838	£14.95

KILL DA VIRUS

A professional viruskiller that recognises more than 138 viruses.

Features include:

- Three versions included from a title bar clock version through a custom screen 3D gadget version (KDV5).
- Brainfile which is being updated through PD channels and of course on Newsflash so you will always have an updated version.
- Store your bootblocks on disk so you can restore them when your bootblock is destroyed by a nasty boot virus (Saddam etc etc).
- Checks your memory and will kill any live virus to avoid further spreading on healthy disks. Any unknown bootblock will be analysed with a 'learn' option so next time it can be identified.
- Userfriendly menus so easy to work with.
- Full support of Kickstart 2.0 and hard disks.



Code	Price
9863	£14.95

POWERMENU V2.0

Features:

- Userfriendly utility to produce your own (hard) disk menu's
- Ideal for floppy and hard disk users
- Full support of mouse, joystick and keyboard
- Multitasking
- IFF picture (background pictures) and Amiga font support
- Big Agnus support
- Built in virus protector
- Comes with PD menu compiler so you can spread your menu
- Several system functions (chipmem on/off, time) included



Code	Price
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POWER COMPUTING

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The new compact A600 from Commodore
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Enhanced chip set
1MB of chip RAM
IDE hard disk controller built-in
Credit card size RAM & ROM slot
A600 **£399**
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Amiga 500+, 2MB RAM **£339**
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Back up disks at lightning speed
Stops all external drives from clicking
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Now with X-Copy Professional!

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The new **PC880B** disk drive can be used directly with the X-Copy Professional 'Cyclone' software without any extra cables or interfaces.
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Our RAM board is designed specially for the new A500+ computer and comes with 1MB of RAM on board to expand your memory to 2MB of chip RAM. Plug in and go operation (fits into trapdoor).
Gives you a total of 2MB of chip RAM **£49**
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8MB for any A500



Plugs into side slot
Fully auto config
Full thru'port
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2MB for any A500

Economy 2MB RAM externally cased
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Plugs easily into your Amiga
Fully supports 1MB chip RAM
Fully compatible with Fatter Agnus **£79**
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Expand your A500's memory to a total of 2MB without disposing of your existing 512K upgrade. Works with 1MB of chip RAM, simple internal fitting. **£49.95**
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512K RAM expansion with battery backed clock and a free disk packed with useful software (4 chip RAM) **£29**
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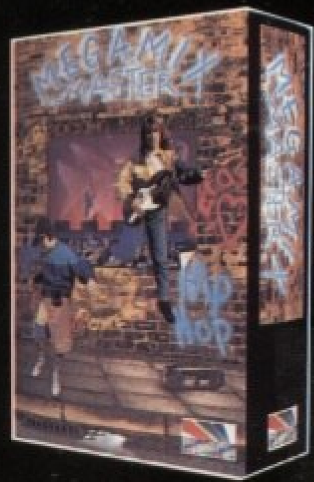
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NEW £39.95 INC. VAT

Real Time Digital Effects





MEGAMIX master is a low cost, high specification digital effects cartridge that plugs into your printer port. It will allow you to sample or record stereo sound from almost any musical source. Special effects such as echo can be added in real time, perfect for the up and coming Karaoke singer who wants to get that live sound through his Hi-Fi. You will find that MEGAMIX masters performance and ease of use is unmatched by any rival. Just plug it in and go . . . .

CUT-Remove samples between pointers and stores it in the cut buffer.

COPY-Copies sample between pointers into the cut buffer.

INSERT-Inserts the contents of the cut buffer into the soundwave.

SPLICE-Removes the sample between pointers, stores it in the cut buffer then slides the rest of the soundwave together.

CHOP-Removes all of the soundwave except for the sample between pointers.

DELETE-Erases the sample between pointers.

MIX-Mixes the contents of the cut buffer with the soundwave.

FLIP-Reverses the sample between pointers.

PLAY CUT-Replays the contents of the cut buffer.



ECHO-Adds user definable echo between pointers.

IN-Makes Sample between pointers start quietly and build up to full volume.

OUT-Offers the opposite effect to IN.

PHASER-Adds phase shift to your sample.

LOUDER-Adds volume.

QUIETER-Decreases volume.

SEEK 0-Finds zero points nearest pointers, used in looping.

FILTER-Removes hiss or high frequency noise from your sample.

PACK-Removes every 2nd sample between pointers.



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ECHO-Adds echo to and incoming sound in Real Time.

DIRECT-Plays incoming sound direct through Amiga.

SYNTH-Adds user definable distortion to sound in Real Time.

PHASER-Applies variable phase shift again in Real Time.

STEREO ECHO-Adds digital delay between L & R speakers.

VIBRATO-Rapidly varies frequency of sound.



Other features include . . .

* Fully multi-tasking
* 3D animated icons.
* UNDO function.
* Compatible with workbench 2.0.
* Runs perfectly on the new A500P.
* Mono sampling up to 52KHz.
* Stereo sampling up to 26KHz.
* 4 or 8 bit sampling.
* Thru-port for printer or Vidi digitiser.
* Stereo 3.5mm jack plug and lead.

LOAD IFF—Load a single IFF sound sample

SAVE IFF-Saves your sample between pointers as an IFF file.

LOAD SONG-Load a song sequence

SAVE SONG-Save a song sequence.

LOAD MIDI-Load a midi sequence.

SAVE MIDI-Save a midi sequence.



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